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No. 3464

OPERATIONS
IN THE
PACIFIC OCEAN AREAS
DURING THE MONTH OF
FEBRUARY 1945

* * *

COMMANDER IN CHIEF
U. S. PACIFIC FLEET AND PACIFIC OCEAN AREAS

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27 August 1945

S-E-C-R-E-T

From: Commander in Chief, U. S. Pacific Fleet and Pacific Ocean Areas.
To: Commander in Chief, U. S. Fleet.

Subject: Operations in Pacific Ocean Areas - February 1945.

References: (a) CinCPac Secret letter A6-5, serial 003974, dated 27 August 1945.
(b) CinCPac Conf. letter A6-5, serial 032341, dated 27 August 1945.

Enclosures: (See Table of Contents following).

1. Subject report is forwarded herewith.

2. References (a) and (b) contain most of the source materials on which this report is based.

3. The operations described herein include those of the SOUTHWEST PACIFIC Area for the same period in order to show their relationship with concurrent operations in the PACIFIC Ocean Areas.

4. This report is SECRET, and shall be safeguarded in accordance with the provisions of Article 76, U. S. Navy Regulations, 1920.

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Flag Secretary.

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PART I.

INTRODUCTION.

1. For the first time since the PALAU operation in September 1944, Central Pacific forces in February engaged in a major amphibious assault: that on IWO JIMA, where initial landings were made on 19 February. During the interim, the major strength of Central Pacific forces had been principally committed in direct or indirect support of the PHILIPPINES Campaign in the Southwest Pacific Area.

2. An assault on IWO JIMA had long been anticipated by the Japanese, and in spite of protracted bombings and bombardments, defenses there were formidable and strongly manned. An account of this operation, which lasted nearly a month, is contained in this Report as ANNEX A.

3. To cover the IWO JIMA landing, carrier-borne aircraft struck the main islands of JAPAN for the first time since the Army planes of General Doolittle took off from HORNET under Admiral Halsey in April, 1942. Strikes by carrier air forces on the home islands had originally been planned for the middle of November 1944, but continuing necessity for supporting the PHILIPPINES campaign had required deferment of the plan until February. The execution of these and other carrier attacks is also related in ANNEX A.

4. A sizeable number of naval vessels under SEVENTH Fleet command still supported operations in the Southwest Pacific Area. Their activities are described in some detail in the body of this report.

5. Land-based air forces and submarines of the Central Pacific continued effective attrition along usual lines, except that coordination with the IWO JIMA assault was naturally in evidence.

6. Strategic bombing of cities on the main Japanese islands by B-29s of the XXI Bomber Command was beginning to assume increasing importance. Although under direct control of the Joint Chiefs of Staff, these operations are also briefly described in the body of this report, to clarify their relationship with operations under the command of Cincpac-Cincpoa.

7. Unless otherwise noted, local times and dates are used throughout this report.

PART II.

LOSSES

8. The following is a summary of losses suffered by the Pacific Fleet and forces operating from Pacific Ocean Areas, and of the losses these forces inflicted upon the enemy in the month of February. This tabulation does not include losses in the Southwest Pacific Area, which appear in this report in the pages devoted to the summary of that area.

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9. Losses for the Pacific Ocean Areas were:

Ship Losses

	UNITED STATES	JAPANESE
Sunk:		
Combatant:	1 CVE	2 DD, 7 SS, 1 DE, 6 PC, 5 SC.
Auxiliary:	1 DM, 1 YP, 1 LCI(G)	1 AO, 4 AK, 18 AP/AK, 1 UN, 18 small craft.
Damaged:		
Combatant:	20 DD, 3 CA, 1 CV, 2 CVE, 2 DE, 2 PC, 1 SC, 1 CL	1 CVE or CVL, 2 DD, 8 DE, 3 SS, 3 SC.
Auxiliary:	20 LSM, 12 LCI(G), 1 APD, 1 AGC, 4 AKA, 1 AO, 1 AE, 2 AH, 1 AKN, 11 LST, 4 APA, 2 DMS, 1 AV, 1 ARS, 2 AN.	1 UN, 15 AK, 3 AP, 29 AP/AK, 46 small craft.

Aircraft Losses

United States lost in combat missions whether from enemy action or operational: 218

Estimated enemy planes destroyed:*

In the air	472
On the ground	239
By AA fire	16
Suicide crashes	8
Totals	735

*NOTE: The figures of enemy losses in the air do not include "probables", and those for planes destroyed on the ground are based for the most part on photographic evidence. The figures for enemy planes destroyed in the air include 68 shot down by B-29s of the XXI Bomber Command. The figure of 218 US planes lost includes 28 B-29s of the XXI Bomber Command lost on combat missions, weather strikes, and photographic reconnaissance missions.

PART III.

NORTH PACIFIC.

A. SURFACE OPERATIONS.

10. Task Force 92, consisting of 3 OCL (RICHMOND, CONCORD, and TRENTON) and 7 DD (SMALLEY, WATTS, WREN, BEARSS, JOHN HOOD, JARVIS, and PORTER), commanded by Rear Admiral J. F. McCrea, sortied from ATTU on 8 February for a bombardment of MATSUWA, where they arrived on 11 February. After two approaches, in each of which they were picked up at long range by enemy radar, the bombardment was cancelled by reason of heavy seas which would not permit highspeed retirement. The force returned to ATTU on 14 February without incident.

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11. On 16 February, the same force, with the addition of the destroyers ROWE and STODDARD, sortied from ATTU for a bombardment of KURABU ZAKI, PARAMUSHIRO. On this occasion, visibility was excellent and the sea smooth. Enemy radar apparently did not detect the force, which conducted a 20-minute bombardment as scheduled. No opposition or return fire was encountered. A total of 5621 rounds of six-inch and five-inch projectiles was fired at a mean range of about 14,000 yards, and about 665 hits in the area were noted in aerial photographs the next day. Shore installations were considerably damaged.

12. The force was partially covered on approach and retirement by friendly planes, and no attacks were made by enemy aircraft, although four "bogies" were picked up by radar shortly after retirement commenced.

B. AIR OPERATIONS.

13. Slightly better flying weather in February permitted Task Force 90 aircraft to step up the tempo of action against the KURILES. A total of 19 missions was flown during 15 days of the month, totalling 103 sorties.

14. Venturas flew seven missions in rocket attacks on enemy installations or in shipping sweeps. Twenty other Ventura sorties provided coverage for Task Force 92.

15. Liberators dropped a total of 26 tons of bombs in 23 sorties against Japanese installations at KURABU ZAKI, SURIBACHI, and KATAOKA. They also were employed in coverage of Task Force 92, and in photographic missions.

16. Mitchells were consistently unsuccessful because of weather in their 16 sorties against enemy positions. For the same reason, only three out of nine of them succeeded in making contact with Task Force 92 in covering missions.

17. Enemy fighter opposition decreased during the month, only 17 being sighted airborne, out of which nine attacked, and damage to four was claimed. No damage to our aircraft was reported.

18. One Ventura was lost during the month to enemy anti-aircraft fire. The crew bailed out over Russian territory and were rescued. Nine Army aircraft were lost operationally.

19. Partial or complete sector searches were flown from ATTU during 20 days of the month, weather preventing flight on the other 8 days.

C. MISCELLANEOUS.

Ship Losses.

20. YP-94 ran aground on the south end of TYGIDAK passage on 17 February due to engine failure, and broke up. The entire crew was rescued, although one officer and one enlisted man had been lost in a landing dory on the previous day.

Russian Shipping.

21. Due to ice in the OKHOTSK Sea, Russian shipping declined to a total of 45 ships transiting AKUTAN during the month.

22. Five surfaced submarines, believed to be Russian, were sighted on 8 February by a Ventura search plane, but failed to answer recognition signals.

PART IV.

CENTRAL PACIFIC.

A. GENERAL.

23. Practically all efforts of naval forces of the Central Pacific during February were either in preparation for, or in execution of, the amphibious assault on IWO JIMA. A detailed account of these activities appears as ANNEX A, making it unnecessary to include in this part of the report any discussion of Central Pacific operations except a section covering land-based air attacks on objectives other than IWO JIMA.

B. LAND BASED AIR OPERATIONS.

(See Plates I and X)

Operations of the XXI Bomber Command.

24. The operations of the B-29s of the XXI Bomber Command based in the MARIANAS, although not under the command of Cincpac-Cincpoa, are described briefly below to show their relationship to developments in the Pacific Ocean Areas, and to the general strategic situation.

25. General - The steady expansion of B-29 strength and operations, which had begun on 28 October 1944, became even greater in February 1945. A total of 2627.3 tons of bombs was dropped in 1001 sorties; with 2444.6 tons of this sum being dropped in 851 combat sorties, and 182.7 tons on 82 weather strike missions. This marked an increase of 1005 tons of bombs over the January figure. There were also 42 unarmed photo-reconnaissance missions and 25 long-range search sorties, comprising three missions flown in cooperation with the FIFTH Fleet in the week preceding the IWO JIMA invasion. The large B-29 strike of 15 February was also coordinated with the FIFTH Fleet strike on TOKYO of 16-17 February.

26. All combat and training missions during February were delivered in daylight. The 313th Wing conducted four training missions; three against MOEN Airfields Nos. 1 and 2 on TRUK Atoll, and one against the airfields at IWO JIMA; while the 73rd Wing flew one training mission to the DUBLON Island submarine base at TRUK.

27. Of the five major missions flown over HONSHU during February, three were sent against TOKYO, one against NAGOYA, and one against KOBE. With increasing experience and greater availability of aircraft, raids on urban areas and aircraft factories in JAPAN showed greatly increased effectiveness.

28. Careful evaluation of the type of target in relation to the types of bombs carried was noted for February sorties. In general, a high percentage of demolition bombs was used against aircraft factories and other buildings of modern construction and low inflammability; while the majority of bombs employed against urban targets were incendiary. Weather also influenced target selection, in that

when radar bombing was expected to be necessary, area targets with good land-water discrimination were chosen.

29. Summary - Results of the major missions by B-29s of the XXI Bomber Command in February were:

		A/C hitting		Bomb Tonnage	
Date	Main Target	MT*	OT*	MT*	OT*
4 Feb.	Urban KOBE	69	30	172.8	78
10 Feb.	A/C Factory TOKYO	84	16	236.5	61.8
15 Feb.	A/C Factory NAGOYA	33	67	104.2	202.2
19 Feb.	Urban TOKYO	119	12	457.7	33.2
25 Feb.	Urban TOKYO	172	29	453.7	70.4
	Totals..........	477	154	1424.9	445.6

* MT - Main Target; OT - Other Targets.

30. Conclusion - Although 24 B-29s were lost on combat missions, 2 on weather strike missions, and 2 on photo missions, in addition to 138 others damaged on the combat missions, the figure of 101 tons of bombs per each B-29 lost during February compared favorably with similar figures of 62.5 tons in January and 78.4 tons in December. The best month in this regard, however, had been November, when 137.2 tons were dropped for each B-29 lost. The Superforts destroyed 68 enemy planes, probably destroyed 60, and damaged 129 during February.

31. During the month, 124 new planes arrived in the MARIANAS to build up the strength of the two wings already there, and to provide the nucleus for the 314th Wing, which was to operate from GUAM. At the end of the month, the SAIPAN-based 73rd Wing had 184 B-29s, the TINIAN-based 313th Wing included 135 planes, and the new 314th Wing 59 aircraft, 22 of which participated for the first time in the strike of 25 February.

Attacks on CHICHI JIMA. (153 sorties - 160.4 tons of bombs).

32. Although the tempo of operations against CHICHI JIMA during the first 15 days of February was greater than in January, the number of sorties still totalled only 58, and the tonnage of bombs dropped came to 67.75. The regular target for the B-24s was SUSAKI airfield, though only one enemy fighter was seen taking off from there during the first half of the month. The AA fire encountered was of heavy calibre, but was invariably meager as well as inaccurate.

33. A few days before the landings on IWO JIMA, the pace of the bombings was increased. During the last 13 days of the month, 95 sorties were flown, dropping 92.65 tons of bombs on SUSAKI Airfield, the CHICHI JIMA radio station, OMURA Town, and the north shore of FUTAMI KO. No interception was encountered, and the bombers continued to escape without damage from the anti-aircraft batteries -- a remarkable fact, considering the great number of anti-aircraft weapons located on the island. Weather over CHICHI JIMA was as poor for our B-24s as the weather at IWO JIMA had long been, a condition necessitating frequent recourse to bombing by radar. Results were unobserved for the most part, but it was manifest that the enemy garrison was making repairs to the runway after each bombing.

Attacks on HAHA JIMA. (40 sorties - 53.5 tons of bombs - 1 aircraft lost).

34. B-24s of the 11th and 30th Army Bomber Groups alternated in dropping incendiary clusters on HAHA JIMA twice weekly during the first half of February, with OKIMURA Town the usual target. Beginning with the 20th, night snoopers made their appearance over the town at 24-hour intervals until February 24th. One Liberator was destroyed and two damaged in the 10-plane raid of the 10th. One crew member was rescued; the other ten men were missing. These were the only planes lost or damaged over HAHA JIMA during the first three months of 1945. At the month's end, the harbors of HAHA JIMA were practically useless to the enemy.

Operations Against TRUK Atoll. (130 sorties - 541 tons of bombs).

35. On only one occasion during February did the Strategic Air Force vary the pattern of its periodic armed and photographic reconnaissance of TRUK Atoll by B-24s of the 30th Army Bomber Group and PB4Ys of VD-5. Eighteen P-38s, accompanied by three PB4Ys of VD-5, struck the airfields on ETEN, MOEN, and PARAM Islands on February 21st, causing one fire among parked planes with their strafing attacks. As they returned to their base, the Lightnings also strafed the wharf at FAIS Island, which a task group had occupied briefly the preceding month. Besides this strike, there were three other missions at various times, comprising 12 sorties. A plan for the interception of Japanese air traffic between TRUK and IWO JIMA proved successful on 2 February, when two F6F(N)s of VMF(N) 534 intercepted and destroyed a Myrt about 120 miles north-northeast of SAIPAN.

36. In addition to the small-scale operations of the Strategic Air Force there, the XXI Bomber Command utilized the "live target" provided by TRUK Atoll as a training ground for new crews and aircraft of the 313th Wing on three occasions, and for those of the 73rd Wing on one mission. On February 8th, 30 B-29s bombed MOEN Airfield No. 1 with 194 tons; the following day, 29 Superforts dropped 138 tons on the two MOEN Airfields; nine aircraft released 33 tons on the submarine base at DUBLON Island on February 17th; and on the 18th, 147 tons of bombs fell on MOEN Airfield No. 2 from 35 B-29s. The P-38s which had escorted the bombers over TRUK in the January training missions were not called on in these February strikes, since experience had shown enemy interceptors to be either not in evidence or not over-zealous, and the chances of the P-38s' suffering operational losses outweighed the need of escorting the bombers.

Operations Against the CAROLINES.

37. During February the following operations were carried on against enemy-held positions in the CAROLINES by Corsair and Avenger squadrons based on PELELIU and ULITHI:

UNIT	TARGETS	SORTIES	TONS OF BOMBS	NAPALM TANKS	DEPTH CHARGES	ROCKETS
VMTB-232	YAP	89	42.2			
VMF-114	YAP	15	5.5			
VMF-122	YAP	97	27.9			
VMF-121	YAP	8	2.0			
VMTB-134	YAP	6				47
VMF-114	PALAUS	421	5.7	42		
VMF-122	PALAUS	521	11.3			
VMF-121	PALAUS	80	11.7	18	18	
VMTB-134	PALAUS	39	2.6			259
Totals....................		1276	108.9	60	18	306

38. In addition, VPB-23 flew 24 dumbo sorties over YAP and three over the PALAUS. The 28th Photo Reconnaissance Squadron flew six sorties over YAP and a single sortie over the PALAUS. Only two planes were lost in the attacks on YAP, and the same number in the operations against the PALAUS. The small total of bomb tonnage relative to the number of sorties flown in the latter area is explained by the fact that a majority of the missions were of a purely strafing nature.

Summary of Operations Against By-Passed Targets.

Target	Sorties	Tons of Bombs	Losses
ROTA	120	2.4	0
PAGAN	110	48 napalm bombs	0
WOLEAI	2	5	0
MARCUS	24	12.45	0
Totals.............	256	19.85	0

Operations by MARSHALLS-Based Squadrons.

39. No figures are available for operations of MARSHALLS-based aircraft during February. It is known, however, that 90 snooper sorties were flown over PONAPE in the Eastern CAROLINES by PBJs of VMB-613, of which one was lost and one damaged by flak. OCEAN and NAURU Islands were visited four times by PBY-5As of VPB-24, but nothing of interest was observed.

PART V.

SUBMARINES.

A. PACIFIC FLEET SUBMARINE OPERATIONS.

Summary of Ships Sunk and Damaged.

40. Pacific Fleet Submarines (Task Force 17), under Vice Admiral C. A. Lockwood, Jr., reported the following estimated damage to the Japanese during the month of February 1945:

Ships Sunk: - (37,740 tons)

Combatant: - 2 DD, 5 SS, 2½ Patrol Craft*, 1 DE.
Auxiliary: - 1 AO, 4 AK, 5 Small Craft, 1 Unidentified.
* One shared by BOWFIN and Air Force.

Ships Damaged: - (12,900 tons)

Combatant: - 1 Unidentified, 3 Small Combatant Vessels.
Auxiliary: - 2 AK, 8 Small Craft, 2 Sea Trucks.

41. The figures below present the monthly average and total tonnage of enemy shipping sunk and damaged as reported by Pacific Fleet Submarines during 1942, 1943, and 1944. They also give the monthly totals for 1945 to the end of February, with comparative total figures for a corresponding period in 1944. Totals of tonnage include all ships; whereas the number of ships excludes ships of less than 500 tons.

	Submarines On Station	Ships		Tonnage	
		Sunk	Damaged	Sunk	Damaged
Monthly Average 1942	15	13	5	83,002	37,491
Monthly Average 1943	24	22	18	147,291	134,581
Monthly Average 1944	46	42	18	253,305	116,533
Totals for 1942	—	153	62	996,026	449,893
Totals for 1943	—	260	216	1,767,493	1,614,968
Totals for 1944	555	503	199	3,039,664	1,398,398
January 1945	47	33	18	183,300	95,850
February 1945	48	14	3	37,740	12,900
Totals to March 1st 1945	95	47	21	221,040	108,750
1 Jan.-1 March 1944	59	74	30	507,245	208,812

Analysis.

42. The story of Pacific Fleet Submarine activity in February 1945 is one of fruitless searches and elusive targets. At the same time, however, it was a month of great success against the underwater craft of the enemy. Five Japanese submarines were destroyed by our underseas fleet, which, joined to the number accounted for by our surface craft, further reduced the striking force of an organization which has consistently failed to realize its latent possibilities.

43. The reason for the marked decline in enemy ships sunk, from a total of 183,300 tons in January to 37,730 tons in February, are various. Although more submarines were on station, enemy traffic was light, contacts were scarce, and our own surface and air force activities were decimating or driving to safer waters the comparatively few enemy vessesl which did venture forth. In addition, many of the submarines on station were engaged in lifeguard services for our B-29 and patrol planes. The chief reason for our submarines' failure to inflict more injury was simply that there was very little at which to shoot. Our invasion of LUZON and MINDORO, together with our control of the air over the CHINA Sea, had

severed the ocean lane connecting JAPAN with her EAST INDIAN Empire to the south by February, making it a hazardous undertaking to attempt to pass shipping through those waters.

44. Indicative of the effectiveness with which the Japanese Navy and merchant fleet had been destroyed or confined to their own Empire waters is the fact that 29 Pacific Fleet Submarines were freed to undergo modernization at one time or another during February in the SAN FRANCISCO Area. In addition, normal overhauls and refits continued, and seven of the older submarines were retired to training duties.

Outstanding Patrols.

45. Although the tonnage sunk and damaged by our submarines was not very impressive, several patrols were quite interesting, and are summarized herewith.

46. BATFISH, 6th War Patrol - The measure of BATFISH's success in her 6th War Patrol was not tonnage. She sank only 4500 tons. Yet hers was adjudged the outstanding war patrol of the month of February. The explanation is that this total consisted of three enemy submarines, which BATFISH sank in a period of four days, for the greatest series of anti-submarine actions since ENGLAND (DE) probably sank six enemy underwater craft in a period of 12 days from 19 to 31 May 1944, while participating in a hunter-killer group with RABY and GEORGE (DEs).

47. Although this war patrol had first carried BATFISH into the South CHINA Sea as far back as 30 December 1944, it was not until 31 January 1945, shortly before she transferred her theater of operations to LUZON Strait, that the first opportunity presented itself for a day periscope attack at 1100 yards range on a small AK proceeding along the south coast of HAINAN. The depth setting was only four feet, and a three degree spread between each of the three torpedoes was used; yet no hits were scored. The belief was that they under-ran an extremely shallow target.

48. The next opportunity to employ her torpedoes came on 9 February, when a target, later identified as a 1500-ton Japanese I Class submarine, was contacted at 2250 by SJ radar at 11,000 yards, proceeding at a plotted speed of 12 knots toward the pass between FUGA and CAMIGUIN Islands, just above the northern tip of LUZON. Closing the range to 1850 yards, BATFISH took advantage of the moonless night and overcast sky to approach by radar on the surface, and at 2330 fired four torpedoes from the bow tubes with a setting of six feet. All of the torpedoes missed, probably because of running astern, (inasmuch as the target's speed was later solved correctly at 14 knots) and were heard to explode at the end of their run eight minutes later. The enemy submarine at no time displayed any intimation that he was aware of BATFISH's presence, his proximity to the scene of frequent bombing attacks on northern LUZON apparently causing him to assume that the explosions were caused by our air forces.

49. Thirty-two minutes later, at 0002, February 10th, BATFISH had again worked into position to launch a surface attack, and fired three torpedoes by radar at 990 yards with depth settings of 4 feet, 2 feet, and 2 feet respectively. The second torpedo hit with a brilliant red detonation that lighted up the entire sky, and the target sank almost immediately. Secondary explosions, believed to be internal explosions in the enemy submarine, were heard three minutes after the

submarine was hit. The enemy SS had sunk so fast, in fact, that the third torpedo passed over the spot where it had been a moment before.

50. When daylight came, BATFISH returned to look over the scene of her night attack in hope of picking up some Japanese survivors in the water, but was rewarded for her efforts only by having a torpedo dropped at her by an American PBY patrol plane which had sighted the oil slick from the sinking, and then spotted the submerging submarine's wake, thinking it that of an enemy. The torpedo fortunately passed overhead.

51. At 1915,on the 11th, in the vicinity of BATULINAO Bay, on the north shore of LUZON, BATFISH picked up radar signals on her APR that indicated presence of the same ineffective type of enemy radar noted on the Japanese submarine sunk the previous night. BATFISH had closed the range to 1200 yards and identified the target visually from the bridge as another Japanese submarine, when the latter unexpectedly dived. Half an hour later, however, BATFISH's sound gear detected the swishing noise that results from a submarine blowing her ballast tanks, and the radar soon picked up the surfacing target.

52. At 2150, BATFISH submerged to radar depth, and 12 minutes later commenced firing four forward tubes at 880 yards range, with a depth setting of four feet. The first torpedo struck, literally blowing the submarine apart and causing it to sink almost immediately. Seconds later, a second torpedo hit the target or the disturbance created by the results of the first hit, and the third torpedo did likewise shortly after. Then followed two loud explosions, believed to be internal explosions. Finally, at 2211, one more explosion, very loud, shook up BATFISH considerably. This was her second submarine in as many days.

53. The 12th of February was uneventful, but at 0155 on the 13th, BATFISH's radar once more announced the presence of a Japanese submarine at 10,700 yards, proceeding on a southeasterly course between CALAYAN and DALUPIRI Islands at six knots. When the range had been closed to 7150 yards and BATFISH had submerged to radar depth, the enemy inexplicably dived, though BATFISH's commanding officer was certain that he had not been detected. At 0310, the APR instruments indicated that the enemy had surfaced or that he was making a radar sweep from just beneath the surface, and at 0353 BATFISH finally regained contact on the enemy with her SJ radar at 9600 yards, after a few anxious moments when it was thought that the enemy was making an approach on her.

54. When the range had closed to 6800 yards, BATFISH dived on the enemy's track and continued her approach from radar depth. Since only two torpedoes remained forward, BATFISH swung for a stern shot at 0448 and fired three torpedoes at 1700 yards with a depth setting of six feet. The first torpedo hit with a brilliant orange explosion and a wide diffusion of pips on the radar screen, and blew the target apart, causing it to sink in less than 10 seconds, leaving no target for the two succeeding torpedoes, which passed through the area where the submarine had recently been.

55. After surfacing to search the oil slick and debris for material of possible intelligence value, BATFISH found her searchlight completely inadequate for the purpose, and so waited for daylight. Dawn revealed several bits of wood and paper with large quantities of oil, but no survivors. Then a wooden box was recovered containing Japanese navigation equipment and a book of tables. A work book, indicated from the positions listed that the sunken submarine had gone from

NAGOYA to FORMOSA, whence it headed down toward LUZON. The dry comment of ComSubPac is well worth recording: "BATFISH sank her third enemy submarine within four days. What monotony!"

56. In addition to the three submarines sunk, BATFISH had damaged a 200-ton landing barge 80 miles south of FORMOSA on 4 February with 20 and 40mm fire. More important was her discovery that Japanese submarines are equipped with air search radar on 158 MCS, though the probability of its being non-directional was hinted by the fact that BATFISH was not definitely detected at any time.

57. ARCHERFISH, 6th War Patrol - The 6th War Patrol of ARCHERFISH was made in the area of the South CHINA Sea off HONGKONG and the southern tip of FORMOSA. Although ARCHERFISH left base on 10 January and did not return until 3 March 1945, she sighted only one target, an enemy submarine, dealing with it as related below:

58. At 2053 on February 14th, while at position 20° 37' N., 127° 33' E., radar contact was made at 7200 yards, and when range had been reduced to 2650 yards, the target was identified as either a submarine or a PC boat. Inasmuch as ARCHERFISH was operating in the same general area with other American submarines, her commanding officer felt compelled to proceed with caution. Having occupied the time from initial contact to 2309 in substantiating by means of dispatches that the vessel could not be one of her sister craft, ARCHERFISH moved in for the attack.

59. At 2315 the target was established visually as being a submarine, and two minutes later four bow tubes were fired at 1300 yards, with a torpedo depth setting of three feet. No hits were scored. Receiving no intimation of the attack by virtue of the wakeless torpedoes employed, the enemy submarine continued on course, exposing herself to four stern shots, which were fired three minutes later at 2320. One torpedo hit; the submarine was completely illuminated for a moment by a large white flash; then the radar pip started to disappear from the scope, and the target was no longer visible from the bridge. At 2341, a heavier explosion was heard in the water directly beneath ARCHERFISH, from a probably internal explosion of the enemy craft. This, with BATFISH's three, made four Japanese submarines sunk in five days by our own underwater craft.

60. LAGARTO, 1st War Patrol - The 1st War Patrol of LAGARTO covered a period of 54 days, 31 of which were in Empire waters; commencing in PEARL Harbor on 24 January, and terminating in SUBIC Bay, LUZON, on 20 March. The commanding officer, Commander F. D. Latta, also acted as Commander Task Group 17.13, a coordinated attack group consisting of LAGARTO, HADDOCK, and SENNET, until SENNET's departure on 14 February.

61. At 2300 on 12 February, HADDOCK made a contact, and the task group commander ordered SENNET and LAGARTO clear, while HADDOCK determined the contact to be two small vessels. In the words of Commander Latta, "With excellent SCR communication, outlined plan to other skippers as easily as if we were in the same wardroom," the plan being to wait for daylight of the 13th to make the attack. Moving in on the surface in line of bearing, at 3000 yards intervals, HADDOCK concentrated on the right hand vessel, while SENNET and LAGARTO gave their attention to the left hand trawler. At 7000 yards, the targets began returning the fire with their 40mm guns, but scored no hits. Within the first ten minutes, both enemy trawlers were crippled, and the submarines closed to dispatch the surface craft with 40mm shells at point blank range. By 0739 the fight was over, with both Japanese craft sunk.

62. HADDOCK again made an initial contact at 1900 on 13 February on two more picket boats. In the gun battle which followed at dawn the following morning, SENNET and LAGARTO had exhausted all of their 5" ammunition by 0700, and the former had suffered several shell hits in her superstructure which wounded one man. HADDOCK fired one torpedo, and when it missed, the task group commander ordered the attack broken off, though the targets had been hit repeatedly by 40mm, and two or three 5"shells had scored.

63. At 1050 on 24 February, while conducting a submerged patrol off OKINO SHIMA, LAGARTO had a JP contact at 5000 yards range on a ship which was identified a few minutes later as a Japanese 700-ton RO Class submarine. At 1113, LAGARTO approached to 3600 yards at periscope depth and fired four torpedoes. The first torpedo hit the target, following which the enemy submarine's screws stopped. Eleven minutes later, there occurred a heavy underwater noise like the hull collapsing. The enemy submarine was assessed as sunk. This made the 5th Japanese submarine sunk during February.

64. On 14 March, LAGARTO and HADDOCK executed a daylight end-around run on an I-Class Japanese submarine, but the enemy saved himself by submerging before LAGARTO, handicapped by having only three engines in commission, could consummate at attack. HADDOCK also lost the contact 45 minutes after she dived, preliminary to making a periscope-depth attack.

65. SENNET, 2nd War Patrol - Although the 2nd War Patrol of SENNET, conducted south of the Japanese Empire and off KII SUIDO, was not highly profitable, it was one of the more exciting ones of the month.

66. During the initial phase of this patrol, SENNET, together with HADDOCK and LAGARTO, operated as a group, under the commanding officer of LAGARTO, to destroy enemy picket boats in the open sea south of the Empire. Contact was made with two pairs of picket boats at widely separated hours on 13 February, and two aggressive gun attacks were made, resulting in sinking two of the picket boats that day, and severely damaging the other two early on the 14th. SENNET then proceeded to KII SUIDO and sank an 1800-ton FUBUKI Class destroyer on 16 February. About two hours before dawn on that morning, contact was made by ST radar on an unknown ship, moving at 12 knots. The commanding officer elected to track the target until dawn, in order to establish beyond a doubt the enemy character of this contact; but he almost lost his opportunity when the arrival of radar-equipped air escort (apparently part of an enemy hunter-killer group) forced SENNET to submerge before there was yet enough light for a periscope attack.

67. Nevertheless, by steaming submerged at high speed on the same course as the target and a short distance ahead of it, SENNET delayed attack until daylight. At 0718, when the distance had been reduced to 1850 yards, SENNET fired three stern torpedoes and went deep almost simultaneously. One minute later, two properly timed torpedo hits were heard; but just preceding these explosions, SENNET was rocked hard by two aerial depth bombs which landed ahead to port and astern to starboard. Fortunately the enemy charges detonated below the submarine's level, although the latter was passing the 200-foot mark in her descent at the time. The lights in the after torpedo room were knocked out, the antenna trunk flooded out, and the sea valves for the air conditioning circulating water were blown open and distorted. At the same time, however, the echo ranging and the propellers of the destroyer were silenced.

68. At 0745, SENNET ascended to periscope depth, but found nothing in sight. By 0830 she had regained the scene of the attack, where she found a large oil slick and approximately 40 Japanese swimming in the water and hanging onto debris. All methods of persuasion were tried in an endeavor to get at least one survivor aboard for questioning -- resort was even had to firing a sub-machine gun into the water close to them, but the survivors steadfastly declined to be rescued, even though the cold temperature of the water rendered their chances of survival nil.

69. BOWFIN, 7th War Patrol - The 7th War Patrol of BOWFIN, conducted in the NANPO SHOTO and Empire areas, accounted for one 1400-ton HATSUHARU Class DD, one 1200-ton Seatruck, and a 100-ton picket boat sunk; as well as a 250-ton picket boat damaged.

70. At 2321 on 16 February, while patrolling at 33° 53' N., 139° 45' E., BOWFIN picked up two targets on her SJ radar at 12,000 yards, heading for MIKURI SHIMA. By 0009 of the 17th, the targets had been identified as destroyers, and at 0056 with the range closed to 1745 yards, BOWFIN approached on the surface and fired three bow tubes at the leading and nearer destroyer, intending to follow immediately with three torpedoes at the second DD. BOWFIN's officer, who had been detailed to stay on the second target, lost sight of it, however, when it pulled ahead sufficiently to obtain the land background of MIKURI SHIMA. Two minutes after firing, one torpedo hit the first target near amidships, followed almost simultaneously by a tremendous explosion which sent a burst of flame high into the air.

71. By 0100 the target pip was smaller, but was still visible. Four minutes later, the first of 26 depth charges dropped by the unharmed second DD exploded at a safe distance, but at 0111 this enemy destroyer was plotted at 300 yards' distance from the cripple, probably engaged in recovering survivors. At 0122, the pip of the damaged destroyer abruptly disappeared, indicating that the ship had sunk. Of three torpedoes subsequently fired at the second destroyer, the two wing torpedoes missed ahead and astern, while the center one exploded prematurely 400 yards down the track. At 0242 this DD dropped eight more depth charges, but none damaged BOWFIN; and soon afterward she made her escape.

72. That same afternoon, BOWFIN surfaced and sank with automatic weapon gunfire a 100-ton picket boat, apparently abandoned after being strafed by our aircraft, by scoring a direct 20mm hit on the target's depth charges after all previous efforts to sink the water-logged vessel with incendiaries had failed.

73. The next attack came on 2 March, when a 1200-ton seatruck was picked up southwest of INAMBA SHIMA. One torpedo, fired from periscope depth, hit the target, and 53 minutes later the seatruck rolled over and sank. Two days later, on 4 March, BOWFIN had a warm automatic-weapons engagement with two 250-ton picket boats at 31° 55' N., 141° 21' E., in which rough seas prevented either side from doing any great damage, though several 40mm hits were observed in one of the picket boats, while an enlisted man on the submarine was injured by shrapnel in both legs. Finding the going too rough, BOWFIN opened the range and abandoned the idea of a gunnery action while rough seas prohibited use of her 5" gun.

74. RONQUIL, 3rd War Patrol - The 3rd War Patrol of RONQUIL, conducted in the area of the BONIN Islands from 1 January to 14 February, accounted for only one enemy vessel, a 10,100-ton tanker, but it was the largest vessel sunk by a

submarine of the Pacific Fleet during February.

75. At 1250 on 17 January, the masts of a ship were sighted. Five minutes later, having determined that he was on the enemy's present track and that the latter's speed was high, the commanding officer submerged for an attack at periscope depth. The enemy vessel, however, when first sighted had been on the extreme right leg of his zig-zag, and hence passed out of range, being identified as an ITSUKU SHIMA Class minelayer. On February 6th, an abandoned Japanese landing barge in good condition was discovered drifting with the current and was destroyed by gun and rocket fire.

76. Placed on the alert by encountering a patrolling trawler, two patrol boats, and two planes in the two hours preceding dawn on 7 February, RONQUIL submerged, and shortly thereafter made out two tankers under the escort of the two patrol boats previously encountered. As the approach developed, it was found impossible to engage both tankers; so the larger, definitely identified as belonging to the TOHO MARU Class, was attacked from periscope depth at 0659 with three torpedoes at 1220 yards. One explosion was heard 65 seconds after firing, and the target's screws were heard to stop. Taking a last look before diving, RONQUIL discovered that the AO had a 30° down angle, and the screws were churning the air. Two depth charges were dropped by the escort craft, but neither was close, and RONQUIL made her escape without difficulty. The remainder of the patrol was occupied with lifeguard duty for B-29s.

77. Other Patrols - Other submarines which sent enemy ships to the bottom were GATO, which sank a 4100-ton AK and a DE; SPADEFISH, which sank two freighters for 8400-tons; PARCHE, which accounted for a 2000-ton AK; and BLACKFISH, TILEFISH, and PIRANHA, which among them destroyed five sampans.

B. ANTI SUBMARINE OPERATIONS.

Operations in the Western MARSHALL Islands.

78. Between 3 and 5 February, a series of anti-submarine actions took place in the vicinity of ENIWETOK, which seemed to indicate unusual enemy concentration there. As a result of a series of sightings and attacks, it was believed that a troupe of midget submarines was operating in the area. There may have been three groups of these, with a total of at least eight midgets. Since it is understood that the Japanese use large submarines for towing three or four midgets in tandem, there may have been at least two or three large submarines present.

79. Reports of sightings and anti-submarine actions resulted in additional surface and air patrols from ENIWETOK. Extensive precautions were taken because the anti-torpedo net across WIDE Passage was being changed, and an opening four to five miles wide existed through which submarines might enter the anchorage; the hydrophones at the western end of WIDE Passage were out of commission; a sizable task force was in the harbor; considerable shipping was in port awaiting movement to forward areas; and another task force was expected to arrive shortly.

80. Attack by BEBAS - At 2122 on 3 February, BEBAS (DE) established radar contact with a surface object while en route from ENIWETOK to ULITHI (12° 15' N, 155° 45' E), and at 2138 this was identified as a submarine. Hedgehogs were fired, but there were no explosions; so maneuvers were begun to regain contact. Having

again picked up the submarine on the sonar gear, BEBAS fired a second full hedgehog pattern at 2204. Thirteen seconds after firing, there were three underwater explosions, one a sharp detonation and two muffled ones. Another pattern of hedgehogs was fired at 2226 with negative results. Wood fragments were picked up and BEBAS located a concentrated oil slick from one spot in which oil was still bubbling two days later. Commander Escort Division 28 believed that the submarine was sunk. Cominch assessed the submarine as probably slightly damaged.

81. Attacks in ENIWETOK Area - Between 3 and 5 February, there were four attacks on contacts in the immediate vicinity of ENIWETOK. These were made by SEDERSTROM and TISDALE (DEs), COUNSEL (AM), and PCs 560 and 1135. In three instances, the target was believed by the attackers to be a midget submarine. In each case, the local assessment was a submarine sunk, but the Cominch assessments were in two instances "insufficient evidence of damage", and in the other two "insufficient evidence of the presence of a submarine".

Attacks by PBM of VPB-21.

82. In the early afternoon of 19 February, a PBM of VPB-21 was returning to base at TANAPAG, SAIPAN, when its radar picked up a target four miles distant, and a moment later the plane's crew sighted a wake caused by the conning tower of a submarine running just beneath the surface. (Position 20° 31' N, 147° 30' E.) Four depth charges were released at an altitude of 50-70 feet on a course intended to cross the submarine's projected track. The conning tower was still visible as the PBM passed over it after releasing its charges, which hit the water an estimated 50 feet short of the conning tower. The tail gunner reported that a portion of the submarine appeared momentarily amid the churning water. Large quantities of small bubbles appeared in the swirl, and quantities of oil soon became evident. No debris was sighted. Cominch stated that there was insufficient evidence of damage for a definite assessment.

Operations in the IWO JIMA Area.

83. During the last days of February, there were four anti-submarine attacks in the vicinity of IWO JIMA. The first of these was on the 25th, during a night retirement to the west of IWO JIMA. NEWCOMB (DD) and several other ships of Task Force 54 made radar contact at 16,000 yards on an unidentified surface contact. Approaching at high speed, NEWCOMB established sound contact at 1800 yards, and when the range had closed to 250 yards she dropped seven depth charges at medium depth. Thirteen minutes after the last depth charge explosion, there was a very heavy underwater explosion near the site of the first depth charge, although no surface disturbance was noted. Thereafter no further contact was established with the submarine, which NEWCOMB believed she destroyed.

84. Attack by FINNEGAN - While in the anti-submarine screen of a task unit proceeding from IWO JIMA to SAIPAN, FINNEGAN (DE) obtained a surface radar contact at 0505 on 26 February, range 17,600 yards. Leaving the formation to intercept the contact at 0612, FINNEGAN lost it after eight minutes at a range of 6700 yards. She arrived 10 minutes later at the point at which the target had disappeared, and at 0642 established sonar contact at 1500 yards. Between this time and 0800, she conducted five hedgehog attacks with negative results. Two depth charge attacks with deep settings and a sixth hedgehog attack followed, all with negative results. At 1000, FINNEGAN fired a full pattern of depth-charges with medium settings, and

four minutes and 51 second after the first charge detonated, there was a heavy underwater explosion accompanied by rumbling and bubbling noises. Contact was not regained, but oil and debris appeared on the surface. Oil continued to rise for eight hours, and 31 pieces of timber were picked up. Cominch assessed this submarine as probably sunk.

85. Attacks by ANZIO TBMs - ANZIO (CVE) was cruising to the eastward of IWO JIMA on the night of 25-26 February on anti-submarine patrol when one of her TBMs made radar contact on a surface target at 0220. When the plane was at 600 feet altitude and about 1000 feet distant, the crew members identified the target as a Japanese I-Type submarine. The submarine had submerged by the time the plane had attained a level flight altitude to drop the special weapon she carried. Releasing the special weapon 30 seconds after complete submergence, and about 150 yards forward of the swirl, the plane pulled up to safe altitude and dropped sonobuoys which transmitted what seemed to be the final reverberations of a heavy explosion at 0228. A relieving TBM discovered an enlarging oil slick just before dawn. Cominch assessed this attack as "submarine probably sunk".

86. At 0252 on 27 February another ANZIO TBM on regular target anti-submarine patrol northwest of IWO JIMA made radar contact with a surface target which the pilot at 0304 identified as an I-Type submarine, completely surfaced and practically dead in the water. Beginning to dive as soon as the plane broke cloud cover, the submarine was out of sight by the time sonobuoys could be dropped. Visual, radar, and sonobuoy contact were established simultaneously at 0338 as the conning tower of the submarine appeared two miles from the TBM. Although the boat dived again at once, the TBM dropped a special weapon about 100 yards ahead of the submarine's swirl from an altitude of 100 feet, at 100 knot speed. Four minutes later, the sonobuoys transmitted a loud explosion, and a 30 foot geyser of water was observed. A slight, muffled explosion followed, and breaking-up noises were heard. Air bubbles came to the surface, and oil began to rise 10 minutes after the original explosion. The local assessment was a submarine destroyed.

87. Attacks by BATFISH - The most outstanding anti-submarine operations of the month were those conducted by BATFISH (SS) which have been described in Part V.

PART VI.

SOUTHWEST PACIFIC.

88. Although Central Pacific forces were conducting a major amphibious operation against IWO JIMA during February, and covering that operation by extensive strikes of the FIFTH Fleet against the Japanese home islands, a considerable number of naval units still remained under the control of the SEVENTH Fleet in the Southwest Pacific Area, and were engaged in supporting operations there.

89. In view of the contribution of naval forces to the success of SWPA operations, and of their general interest to naval personnel, the amphibious assaults are described in some detail below, although they were not under the command of Cincpac-Cincpoa.

General.

90. The LUZON Campaign, which began on 9 January, still required the major attention of Army ground forces, which made good progress during February, recapturing the greater part of the central plains. The extent of land areas taken during the month are illustrated in Plates II and IV.

91. Associated with this campaign were the amphibious assaults which opened MANILA Bay to shipping by landings at MARIVELES Harbor and CORREGIDOR Island at the entrance to the bay, on 15 and 16 February. Further extension of U.S. control in the PHILIPPINES was accomplished by another landing at PUERTO PRINCESA on the island of PALAWAN on 28 February, and by a number of minor landings on smaller islands located near shipping routes through central PHILIPPINES waters, in order to provide safe passage through SAN BERNARDINO Strait and VERDE Island passage.

92. In LEYTE, SAMAR, NEW BRITAIN, and NEW GUINEA, mopping up of isolated enemy remnants continued, heavy air support assisting in the two latter areas.

93. The major operations are described further in the following sections.

A. LUZON OPERATIONS.

94. No attempt will be made in this report to follow in detail the progress of Southwest Pacific ground forces on LUZON, although some of the more outstanding events of the month are enumerated below. The positions of forward ground elements as of the beginning and end of the month are illustrated in Plate II.

95. Troops in LUZON at the beginning of the month included the 43rd, 32nd, 25th, 6th, 37th, 40th, and 38th Infantry Divisions; the 1st Cavalry Division; the 158th and 34th RCTs; the 24th Cavalry Reconnaissance Troop and the 112th Cavalry RCT; the 13th Armored Group; the 126th Infantry Regiment; the 6th Ranger Battalion and the 11th, 14th, 15th, 66th, and 121st Filipino Infantry Regiments.

96. By the end of February, these forces had been reinforced by the 33rd Infantry Division, the 11th Airborne Division (with two battalions of 19th Infantry attached), the 503rd Parachute RCT, and the 12th Cavalry RCT. The total of U.S. Army Ground and Service Forces on LUZON had increased from 160,789 on 31 January to 261,245 on 28 February.

97. The major accomplishments of the month were: the reduction of CORREGIDOR and the MARIVELES Area, as described elsewhere, thus opening MANILA Bay to shipping; the combined airborne and waterborne landings in the NASUGBU-TAGAYTAY Ridge area, followed by swift advance to MANILA and CAVITE; the pushing back of the Japanese on the north and east flanks from the central plains into the mountains; the swift advance through the central plains of LUZON to MANILA; the investment of the last enemy remnants in the center of MANILA itself; the recapture of thousands of American prisoners from various concentration camps where they had been confined since the Japanese occupation; the gradual elimination of enemy pockets of resistance in the western range of mountains; and the development of the SUBIC Bay area, captured in January, as a base of operations.

98. Casualties on LUZON reported by CincSWPA for February were: enemy - 44,804 killed, 578 captured; U.S. Army - 2002 killed, 8132 wounded, 107 missing.

99. The areas overrun by Army forces during the month included many airfields which would be of value in future operations. The main CLARK Field airfield system, captured in January, was made available for use by clearing the enemy from heights dominating the area.

B. THE MARIVELES-CORREGIDOR OPERATION.
(See Plate III)

General.

100. Landings had been made during the closing days of January at NASUGBU, just south of the entrance to MANILA Bay, and near OLONGAPO, north of BATAAN. Troops which where landed in these areas and at LINGAYEN were converging on MANILA by the middle of February, but in order to open that port for supply of Army forces, and for logistic support of future operations, it now became necessary to reduce the fortress of CORREGIDOR blocking entrance to MANILA Bay, and to complete the occupation of BATAAN Peninsula and the CAVITE shore.

101. Opposition from enemy naval forces was expected only in the form of submarine, MTB, or suicide craft attacks; and enemy air strength had practically been eliminated. The garrison on CORREGIDOR was estimated at 850 troops, although more than 4000 enemy dead were counted by the end of occupation. Small garrisons were reported on CABALLO, CARABAO, and EL FRAILE Islands. Enemy forces on BATAAN were estimated at 15,000 troops (including substantial numbers of service troops); and defense preparations were believed in progress in and near MARIVELES Bay. Numerous cave and pillbox positions had been noted in reconnaissance photographs of CORREGIDOR, but the large ex-U.S. batteries were believed to have been destroyed by air bombardment. Land mines, as well as other defenses, were expected at the beaches.

102. Extensive mine fields were reported guarding the entrance to MANILA Bay, consisting of both old U.S. and newer Japanese mines. These fields were expected to constitute the major difficulty in opening the Bay to shipping, and had to be swept within close range of whatever enemy batteries should survive preliminary bombardment.

103. The following description is primarily from the naval viewpoint, because of its particular interest and informative value to naval personnel. The ground operations will presumably be covered in detail in the reports by Army commanders to the War Department.

104. The BATAAN-CORREGIDOR Attack Group (Task Group 78.3) was under the overall command of Rear Admiral A. D. Struble, with Rear Admiral R. S. Berkey as second in command, and also acting in command of the Fire Support Group (Task Group 77.3). The composition of the various units comprising the Attack Group is set forth in the sections below describing their operations.

105. SUBIC Bay, about 30 miles north of CORREGIDOR, was employed as a base of operations; both for assembly and embarkation of Army troops, and for anchorage, replenishment, and temporary repair of naval vessels.

106. Fighter cover, air support of troops, and airborne troop lifts were provided by the Fifth and Thirteenth Air Forces, basing on MINDORO and LEYTE.

Their operations, although mentioned incidentally in the account which follows, are described in more detail under the Land-Based Air section (SWPA) of this report.

Minesweeping Problems.

107. General - The minesweeping operations in the vicinity of CORREGIDOR and MARIVELES were not the largest of the Pacific war to date, (452 mines as compared with about 1000 in the Western CAROLINES), but the minesweepers here were opposed by shore batteries at comparatively short ranges, and in some cases mines were found so close together as to create considerable danger to the sweeping vessels themselves, both before and after they were cut. Magnetic and acoustic, as well as contact and controlled mines had to be anticipated. The successful accomplishment of this mission, with the loss of only one YMS and damage to one AM sweeper, is therefore considered one of the outstanding feats of this little-publicized force.

108. The ships available consisted of six AM-type sweepers (SAUNTER, SALUTE, SCOUT, SCRIMMAGE, SCUFFLE, and SENTRY), plus 15 YMS, organized into three units of five each.

109. Previous intelligence indicated several reported or suspected minefields across the entrances of MANILA Bay (See Plate III). As actually developed by minesweeping operations, a large field extended south from CABALLO Island, in which 396 enemy chemical-horned type contact mines were swept; another field with 28 U.S. Army electrically controlled mines was cleared west of CORREGIDOR, extending to LA MONJA Island; 19 enemy chemical-horned mines were swept from the entrance to MARIVELES Bay, with further electrically controlled mines suspected (two of our DD were mined here in swept areas); eight horned-type mines were swept between CORREGIDOR and BATAAN, and further electrically controlled mines were suspected (six mine explosions occurred near PT boats in swept areas; and one enemy chemical-horned mine was swept between CABALLO Island and CORREGIDOR.

110. Sinking of the floating mines after they had been cut posed a serious problem. All vessels in the area assisted in this duty, using 40mm, 20mm, .50 cal., and small-arms fire for the purpose, and many narrow escapes from damage by thickly-strewn "floaters" were reported.

Fire Support Requirements.

111. Composition - The Fire Support ships employed in the MARIVELES-CORREGIDOR Area throughout most of the operation were in two units, including five CL (PHOENIX, BOISE, DENVER, CLEVELAND, and MONTPELIER) and nine DD (HOPEWELL, NICHOLAS, TAYLOR, O'BANNON, FLETCHER, RADFORD, JENKINS, LAVALLETTE, and ABBOTT). Due to the diversity and semi-independent nature of the missions performed, the identity of the two units was not maintained as such, and they will be discussed as one group.

112. An additional Fire Support Unit was available in reserve at LINGAYEN Gulf if needed, and was actually called on for a few salvoes of "token" bombardment late in the operation. This Unit consisted of three CA(HMAS SHROPSHIRE, PORTLAND, and MINNEAPOLIS) and six DD (CONWAY, EATON, BRAINE, FRAZIER, HMAS ARUNTA, and HMAS WARRAMUNGA).

113. The entire Fire Support Group was under the command of Rear Admiral R.S. Berkey, and based on SUBIC Bay.

114. Mission - Neutralization of enemy strong points in and around the entrance to MANILA Bay was the principal mission of the Fire Support Group; both to cover minesweeping operations at the entrance (see above), and to protect the landing and support subsequent operations of troops at MARIVELES and on CORREGIDOR.

115. Photographic intelligence of enemy installations was meagre, but it was believed that heavy air strikes previously had destroyed all ex-U.S. heavy batteries that might have been made operative, as well as any new batteries that may have been installed in exposed positions. As it actually turned out, medium and small calibre enemy mobile guns firing from cave positions were the only ones which caused serious trouble.

116. In addition to mines, small enemy suicide boats were expected to be troublesome.

Conduct of Operations.

117. Operations 13 February - Preliminary minesweeping commenced at 0529 along the 100 fathom curve. The larger AMs swept areas AUDREY, ADELAIDE, and KAREN, cutting 28 old U.S. Army electrically controlled mines between LA MONJA and CORREGIDOR Islands. The YMS units swept areas RUTH and MABEL, with negative results. (See Plate III, which indicates the above areas).

118. In the meantime, fire support ships followed the sweepers, and took under fire selected targets in the MARIVELES Area, and on the islands of CORREGIDOR, CABALLO, and EL FRAILE.

119. Heavy bomber strikes were being delivered concurrently on CORREGIDOR, and specific targets were difficult to distinguish, not only because of dust and smoke, but also because the enemy did not elect to disclose his positions by firing at this time.

120. Operations 14 February - Preliminary operations continued on the 14th, with minesweepers, closely supported by two destroyers, making three round trip sweeps through area SUSIE (the channel south of CORREGIDOR). Contact mines were thick there, a total of 110 being cut during the day, and created hazardous navigational problems,before they could all be destroyed.

121. The first sweep passed about 5000 yards from CORREGIDOR, and enemy shore batteries opened up. Many near misses splashed near the minesweepers, but none received direct hits, and effective counter-battery fire of the supporting destroyers and the sweepers themselves silenced the batteries. On later sweeps, no gunfire was encountered, even though the last pass came within about 1200 yards of the enemy guns.

122. During the afternoon, five YMS sweepers, with two close-support destroyers, were sent to sweep area HELEN, north of CORREDIDOR. Three enemy shore batteries, which were difficult for most of the fire support ships to cover, opened up and scored six or seven direct hits on YMS 48, damaging her so that she had to be sunk. The supporting destroyers were also hit; HOPEWELL by four shells esti-

mated as six-inch, and FLETCHER once. The latter, however, continued to deliver effective fire, at the same time rescuing survivors of YMS 48.

123. The sweeping group was ordered to retire, while PHOENIX (CL) moved into position from which she could use her guns effectively. Enemy shore batteries were quickly silenced by the combined weight of all naval gunfire, assisted by air strikes.

124. At about 1600, another supported group of YMS sweepers commenced cutting a channel into MARIVELES Harbor, in preparation for landings the next day, sweeping a total of 16 contact mines. No opposing gunfire was encountered, but LAVALLETTE and RADFORD struck mines, believed to be electrically controlled, within 12 minutes of each other. Both were considerably damaged, but were able to proceed out of the harbor under their own power, and were later sent to SUBIC Bay for repairs.

125. Operations 15 February - After another check sweep of MARIVELES Harbor, landings were made there at 1000 of the 15th. The troops employed in the assault were the 151st Infantry RCT and the 3rd Battalion of the 34th RCT, totalling about 4300 troops.

126. Assault craft were: 1 CGC, 6 LCI(L), 5 LST, 6 LCT, 20 LSM, and 25 LCM. Inshore support was provided by 2 PC, 6 LCI(R), and 6 LCS(L). Salvage craft were also present, and the convoy was escorted by 6 DD.

127. Aside from LSM 169 striking a probable mine, and some difficulty in beaching due to the shallow approaches, the assault presented little difficulty, and troops proceeded to their objectives without opposition. Supporting gunfire against enemy batteries on the north side of CORREGIDOR kept them ineffective.

128. Sweeping in area JANE was continued during the day, in which 154 more contact mines were cut; in addition to one inside CABALLO Bay, where some ineffective gunfire, which was quickly silenced, was encountered.

129. Operations 16 February - At about 0320, enemy suicide boats attacked the LCI(G)s guarding the entrance to MARIVELES Harbor, sinking three of them. Survivors were rescued by PT boats.

130. Fire support ships returned to the area at 0500, and at 1715, Task Unit 77.3.5 (the reserve Fire Support Unit) delivered a "token" bombardment on CORREGIDOR. These ships had been called forward from LINGAYEN when it appeared that heavy ammunition expenditures might create a shortage in the area.

131. Following an hour of heavy air strikes, the 503rd Parachute Infantry Battalion was dropped on the main plateau of CORREGIDOR; the first drop starting at 0839. Shortly after 1000, amphibious landings were made at SAN JOSE Beach, on the south side of CORREGIDOR, by the 3rd Battalion of the 24th RCT, which had been lifted from MARIVELES in LCMs. Close-in-support was provided by LCS(L)s and LCI(R)s. Some opposition at the beach was reported, and land mines were encountered. Small caliber fire was received from CABALLO Island and points on CORREGIDOR, which destroyers took under fire.

132. Reinforcement Landings - About 900 troops were landed at the same beach by five APDs on 17 February as reinforcements, with destroyers providing fire

support. Enemy opposition by machine guns and mortars was again encountered, causing some casualties to personnel and landing craft before they were silenced.

133. Aided by air support and continuing naval gunfire, troops on CORREGIDOR succeeded in virtually eliminating enemy opposition on the island by the end of the month.

134. Later Minesweeping Operations - Mines continued to be found during check sweeps in areas SUSIE and JANE on the 16th, 18th, and 19th, as well as three more in MARIVELES Harbor. It became evident that mines remaining in area HELEN were electrically controlled, and the north channel was closed to navigation until the control stations could be captured.

135. On 26 February, SAUNTER (AM) struck a mine near EL FRAILE, and was badly damaged. Salvage operations were successful, however, and she was towed to SUBIC for repairs.

136. Subsequent Fire Support - On 17 February, BOISE and PHOENIX, as well as three destroyers, continued call-fire missions on CORREGIDOR.

137. A special mission of bombarding the TERNATE Area on the south shore of MANILA Bay was fired by CLEVELAND (CL) and two destroyers (O'BANNON and TAYLOR). The target areas were reported as completely covered, although firing was held up for a time to allow civilians to get clear.

138. In order to complete the conquest of CORREGIDOR, it was apparent that naval gunfire could be most advantageously used. Accordingly, Task Unit 78.3.5 had been organized on 16 February under the command of Captain R. W. Cavenagh, (ComDesDiv 46), and consisted of the destroyers CONVERSE (F), THATCHER, DYSON, CLAXTON, SAUFLEY, and CONYNGHAM.

139. CONYNGHAM was employed principally in escort duties, but the remaining destroyers maintained continuous fire support and illumination services during the entire period from 16 to 28 February, usually two and sometimes three of them at a time being available in the area.

140. Close coordination with Army forces was maintained at all times, and aided by spotters ashore, destroyers pin-pointed enemy positions from ranges often less than a thousand yards, delivering extremely effective five-inch and automatic weapon fire. The 40mm weapons were found especially useful at these short ranges.

141. Both 5-inch and 40mm weapons were normally fired a single shot at a time, and were spotted from shore directly into the mouths of the caves.

142. The planned integration of Army and Navy forces at such close proximity provided a unique situation, and the contribution of naval fire support toward final elimination of the enemy on CORREGIDOR was not inconsiderable. More than four thousand enemy dead were counted by the end of the occupation, although pre-assault intelligence had estimated the garrison as probably not more than 850.

PT Boat Operations.

143. Twelve PT boats from squadrons 21 and 27 were assigned to the Attack Group, and were employed to investigate and strafe suspected enemy shore installations, rescue survivors from LCI(G)s and stranded paratroopers, destroy enemy small craft, maintain a blockade around CORREGIDOR, intercept and kill or take prisoner any Japanese attempting to escape, provide local transportation, screen other naval units against enemy suicide boats, and later to investigate wrecks in MANILA Harbor.

144. As early as 7 February, PT boats had investigated MARIVELES Harbor, and islands at the entrance to MANILA Bay; and during the night of 13-14 February, were the first naval units actually to enter MANILA Bay since CORREGIDOR surrendered in May 1942.

C. THE PALAWAN OPERATION.

General.

145. Designed to extend Allied Air and Naval control to the southwestward through the PHILIPPINES, an amphibious landing to seize the PUERTO PRINCESA Area of PALAWAN Island was made on 28 February.

146. PUERTO PRINCESA, near the middle of the southeast coast of PALAWAN, possesses a good harbor, and was suitable for a seaplane base. The airdrome, about one mile east of the town, included two runways of 4300 and 4500 foot length respectively, MALAMPAYA Sound, in northern PALAWAN, was reputedly one of the finest natural harbors in the PHILIPPINES, and could serve as a naval and seaplane base.

147. Estimated enemy forces on PALAWAN totalled about 3500 troops, of which approximately 2000 were thought to be in the PUERTO PRINCESA Area. Only 600 of the latter, however, were considered as combat troops.

148. No minefields had been reported, and shore defenses were believed to be weak. Only a few small guns had been noted in the area.

149. Beaching conditions were in general undesirable, due to fringing reefs, coral heads, and mangrove swamps backing some beaches. It was planned, therefore, to land the first few waves in LVTs and LCMs; conducting subsequent reconnaissance to find suitable "slots" for later beaching of LSTs and LSMs.

150. Assault troops consisted of the 186th RCT (reinforced) of the 41st Division, comprising 5322 combat troops. In addition, service units totalling 2094 troops, and Air Force components with a personnel of 7984, were to be landed later. The operation was to be staged from MINDORO.

151. Within six days, one fighter group and one night fighter flight was to be established ashore; and within 15 days after the landing, 1 medium bomber group, 1 ASR flight, and 1 PBM squadron (tender-based), were to be in operation.

152. Subsequently, 1 VPB squadron of PB4Ys, 1 VPB squadron of Venturas, 1 photo-reconnaissance squadron, and staging facilities for 1 heavy bomber group were planned.

153. Naval facilities for two MTB squadrons were to be established for control of adjacent waters.

Naval Forces.

154. The Attack Group (Task Group 78.2) was commanded by Rear Admiral W. M. Fechteler, and included 1 CGC, 5 DD, 4 APD, 1 LSD, 10 LCI(L), 20 LSM, 6 LST, 7 LCI(R), 3 LCI(M), 4 LCS(R), 1 PC, 3 SC, 4 YMS, 1 LCI(D), and 1 ATF.

155. The first Reinforcement Echelon, scheduled to arrive on the day following the landing, consisted of 3 DD and 19 LST.

156. The Covering and Support Group (Task Group 74.2) under Rear Admiral R. S. Riggs, comprised 3 CL (DENVER (F), CLEVELAND, and MONTPELIER) and 4 DD (FLETCHER, JENKINS, O'BANNON, and ABBOTT).

157. In addition, MTB squadrons 20 and 23, with WILLOUGHBY (AGP); and a slow-tow convoy, consisting of 1 DE, 1 AOG, and 1 ATR towing a PT dock, were included in the naval forces.

Landing Operations.

158. The Attack Force sortied from MINDORO on 26 February, and passage to the objective was made without incident. Air cover for all convoys was provided by the 5th Air Force.

159. Extensive bombing and strafing by the 5th and 13th Air Forces was carried out during the two days preceding the landings.

160. The Covering and Support Group delivered scheduled bombardment fire for about one and one-half hours, with no return fire noted.

161. Starting at 0845, initial landings were completed as scheduled, except for some difficulty in beaching the larger landing craft in later waves. No opposition was encountered by the troops, who advanced rapidly inland, securing both of the nearby airfields by 1300.

162. Direct air support was provided continuously by A-20s for as long as any need was apparent. In addition to bombing selected targets, these aircraft reported sinking one AK and damaging two others in a nearby harbor.

163. During the afternoon, one infantry company was transported in LVTs and LCMs to the mouth of the IWAHIG River, where they landed without opposition, except from a few rounds of small-arms fire.

164. The Reinforcement Echelon and two PT squadrons arrived early the next morning, the commander of the latter reporting that he would be ready to start PT patrols that night.

D. MINOR NAVAL OPERATIONS.

Heavy Covering Group.

165. Following the LINGAYEN Gulf landings in January, the Heavy Covering Group (Task Group 77.2) under the command of Rear Admiral G. L. Weyler, and consisting of the OBBs PENNSYLVANIA (F), MISSISSIPPI, WEST VIRGINIA, and COLORADO; the CAs PORTLAND, MINNEAPOLIS, and HMAS SHROPSHIRE; and 12 DDs, remained in the LINGAYEN Gulf area to guard against enemy surface or submarine raids, and to assist in air defense and perform call-fire supporting missions.

166. On 8 February, the heavy cruisers and five of the destroyers were organized into a separate task unit (77.2.5) as a reserve bombardment unit to support the CORREGIDOR Operation. Their employment as such has been related elsewhere in this report.

167. Call-fire missions turned out to be the principal work of the Heavy Covering Group during that period in February when they remained in LINGAYEN Gulf. Almost daily "bogies" which usually turned out to be friendly aircraft, were reported, but no attacks were made on the group.

PT Boat Patrols.

168. During February, PT boat squadrons, based on SUBIC Bay and LEYTE, carried out aggressive patrols against enemy small craft in the central PHILIPPINES and off the west coast of LUZON. Enemy shore positions were also strafed and rocketed.

169. PT boats were particularly active in the MANILA Bay area, as described elsewhere in this report.

170. During daylight of the 23rd, PT boats swept CORON Bay, destroying 4 launches, 2 lighters, and 1 lugger, and setting fire to a large fuel dump.

Operations off NASUGBU.

171. In continuation of the NASUGBU landings, commencing on 31 January, and described in the January Report of Operations, a number of naval units remained near the objective. Enemy suicide boat attacks, in which PC1129 was sunk, continued into the early morning of 1 February, two small enemy boats being sunk by destroyers and DEs about daylight. In the middle of that day, light naval units, investigating TALIN Bay to the southward, sank two more small power boats with gunfire.

172. During the following night, due to difficulty in retracting LSTs, screening vessels again remained in the area. At about 2300, two U.S. PT boats, later identified as PTs 77 and 79, approached the screen, and due to failure of recognition, were destroyed by gunfire of destroyers and DEs. All except four crew members were rescued, however.

Loss of LST 577.

173. A large convoy of ships and landing craft, with escorts, was transporting reinforcements and supplies from HOLLANDIA to LEYTE on 11 February, when at about

0905, LST 577 was struck by one of two torpedoes fired at her. The LST broke in two, the stern section sinking immediately, while the bow remained afloat, and was taken in tow. It was later destroyed by gunfire, however, due to towing difficulties and the desire of avoiding further delay to the convoy.

174. Loss of life was comparatively heavy, totalling 14 officers and 150 enlisted men of the Navy and Army personnel embarked at the time.

175. Two more torpedoes, which narrowly missed LST 742, were sighted more than two hours later in the same general area, while the convoy was still executing emergency maneuvers as a result of the first attack. An enemy submarine was believed to be responsible for both attacks, and escort vessels made several counter-attacks without positive results.

Torpedoing of RENSHAW.

176. At about 1100 on 21 February, while screening a convoy of about 50 landing craft just south of SIQUIJOR Island enroute from LEYTE to MINDORO and SUBIC Bay, RENSHAW (DD) was struck amidships by an enemy torpedo. Both engine rooms and the after fireroom were flooded, and all power lost. Torpedoes, depth charges, and other heavy topside weights were jettisoned, and damage control measures kept the vessel afloat.

177. A submarine, tentatively identified as an RO 32-33 type, partially broached after the explosion, and was taken under fire by 40mm guns without hits being scored. WALLER and SHAW (DDs) commenced a ten-hour search around SIQUIDOR Island, but the submarine escaped.

178. SMITH (DD) took RENSHAW in tow toward LEYTE, but rejoined after being relieved by Army tugs. During the night of 24 February, SMITH encountered a 200-ton Japanese steam lugger, and sank it with gunfire.

E. LAND-BASED AIR OPERATIONS.
(See Plate I)

Air Support of PHILIPPINES Operation.

179. The heavy air strikes made during January in the Southwest Pacific Area paid dividends the following month. From being an organization that could contest control of the air over the PHILIPPINES with our squadrons in the last quarter of 1944, the Japanese Air Force had become so attenuated or reluctant by February 1945 that Far Eastern Air Forces planes were able to fly 3900 sorties against targets 3500 miles apart, while the enemy could muster only 60 sorties. At no time during the month did the enemy carry out an observed mission - offensive or defensive - comprising more than four planes. SWPA aircraft reported shooting down 153 enemy planes during February, and of these, 96 were over FORMOSA, 13 over FRENCH INDO-CHINA, 7 over LUZON proper, and 5 over LEGASPI Peninsula.

180. The greater part of the total 13,719 tons of bombs dropped during February in the entire Southwest Pacific Area by 12,524 sorties was devoted to support of the various landings in the PHILIPPINES, or to softening up enemy positions in preparation for advances by our ground troops. By 5 February, 523 tons of bombs had been dropped at CAVITE, following which the 11th Airborne Division

occupied this once strongly defended naval base without opposition. The landing at CORREGIDOR was preceded by one of the most concentrated air assaults of the Pacific War. Heavy bombers pounded the island almost daily from 23 January until 25 February with an average of well over 100 tons per day. When CORREGIDOR fell, attention was centered on the Fort STOTSENBURG, ANTIPOLO, and LAGUNA DE BAY Areas where ground forces were making but slow progress against dug-in positions. On 28 February, 59 heavy bombers struck enemy defenses at IPO Dam, but the positions were so well organized that even this heavy attack was considered relatively ineffective.

181. A surprising feature of the scene revealed at CLARK Field when our troops overran it was the great number of enemy aircraft which lay about the strips and revetments in an inoperational condition, despite the fact that only a few miles away were to be found ample quantities of the spare parts required to make them again serviceable. More than 800 Japanese planes were counted there and in the LINGAYEN Area: yet their unserviceability seems to have been the result of disorganization rather than lack of spares, since odd caches of miscellaneous parts were still being found at the month's end. Over 200 new engines, most of them never uncrated, were found in MABALACAT, never more than three or four in one place, scattered underneath houses, old rice mills, public buildings, little shacks in outlying districts, and even on sidewalks and alleys. Ample underground fuel stores existed, and apparently pilots were not lacking. This was just another instance of the unpredictable nature of the Japanese.

Aerial Activity in Other Sectors

182. Continuing the strikes on FORMOSA which had been inaugurated from LUZON bases on 22 January, aircraft of the Far Eastern Air Forces made 605 sorties there in February, and dropped 1150 tons of bombs, chiefly on MAKO, HEITO, KARENKO, TAINAN, and TAKAO. At the last place, the bombing was considered sufficiently effective to halt aluminum production, and rail and highway transportation was interdicted at many points. Other popular targets were Formosan airstrips, planes, and buildings.

183. The weakness of the enemy's air defenses elsewhere was also demonstrated by lack of opposition to the heavy daylight attacks on the vital oil fields and refineries at JESSELTON, MIRI, TAWAO, LABUAN, MANGGAR, and LAHAD DATU, as well as BALIKPAPAN and BRUNEI. A total of 563 sorties was sent against BORNEO, but only six enemy planes were destroyed and four more probably destroyed.

184. The capture of the two airfields near PUERTO PRINCESA on PALAWAN Island on 28 February brought important enemy regions - particularly BORNEO - within closer striking range, a mere 210 miles; while CAMRANH Bay was closed to only 650 miles.

185. In the CELEBES and HALMAHERAS, attritional strikes on airbases, supply areas, and personnel continued. Searches for enemy shipping by our patrol bombers, and attacks on targets of opportunity, were made daily in the JAVA-BALI-LOMBOK Areas and the TIMOR-FLORES-SOEMBA Areas. In the WEWAK-SARMI Area, destruction of defense positions, supplies, and personnel centers aided ground troop advances. The air blockade of the North SOLOMONS also continued.

Summary.

186. Altogether, 13,719 tons of bombs were dropped by planes of the Far Eastern Air Forces during February **during the** 12,524 sorties striking at targets extending from BOUGAINVILLE on the east to JAVA on the west, and from FORMOSA on the north to TIMOR on the south. This marked an increase of 7279 tons of bombs over the January figure, or more than double the weight of the preceding month; and the sortie figure was 4807 greater than that for January.

Disposition of U.S. Aircraft in the PHILIPPINES in January and February 1945.

January 31st	February 28th
LUZON	LUZON
1 Fighter Squadron	3 Fighter Groups
1 Night Fighter Squadron	2 Night Fighter Squadrons
1 Headquarters Squadron	- - - - - - - - - - - - - -
1 Patrol Bombing Squadron	7 Patrol Bombing Squadrons
	2 Medium Bomber Groups
	1 Light Bomber Group
	2 Reconnaissance Squadrons
	1 Photographic Squadron
	1 Liaison Squadron
	1 Troop Carrier Squadron
	7 Scout Bomber Squadrons
MINDORO	MINDORO
3 Fighter Groups	4 Fighter Groups
1 Night Fighter Squadron	1 Night Fighter Squadron
2 Reconnaissance Squadrons	1 Reconnaissance Squadron
1 Photographic Squadron	1 Photographic Squadron
1 Patrol Bombing Squadron	6 Patrol Bombing Squadrons
1 Light Bomber Squadron	2 Light Bomber Squadrons
1 Troop Carrier Squadron	1 Troop Carrier Squadron
	2 Heavy Bomber Groups
LEYTE	LEYTE
2 Fighter Groups	- - - - - - - - - - - - - -
4 Marine Fighter Squadrons	4 Marine Fighter Squadrons
7 Patrol Bombing Squadrons	4 Patrol Bombing Squadrons
1 Light Bomber Group	- - - - - - - - - - - - - -
1 Air Combat Camera Unit	- - - - - - - - - - - - - -
1 Medium Bomber Group	- - - - - - - - - - - - - -
1 Heavy Bomber Group	1 Heavy Bomber Group
1 Troop Carrier Group	2 Troop Carrier Groups
1 Troop Carrier Squadron	- - - - - - - - - - - - - -
1 Night Fighter Squadron	1 Night Fighter Squadron
1 Photographic Squadron	2 Photographic Squadrons.

January 31st SAMAR	February 28th SAMAR
1 Heavy Bomber Group	1 Heavy Bomber Group
1 Marine Observation Squadron	1 Marine Observation Squadron
2 Marine Fighter Squadrons	3 Marine Fighter Squadrons
	1 Patrol Bombing Squadron
	1 Map Squadron

F. SUBMARINE OPERATIONS.

Summary.

187. Assessments by Commander Submarine SEVENTH Fleet indicate that submarines of the SEVENTH Fleet, from the beginning of the war through 28 February 1945 had sunk 3,803,498 tons of enemy shipping and damaged 2,192,956 tons more, for a gross total of 5,996,454 tons. This represents a total of 645 ships of more than 500 tons displacement sunk, and 346 ships of more than 500 tons damaged.

188. In that same period, SEVENTH Fleet submarines scored hits with 1793 out of 5239 torpedoes fired at enemy vessels, for a percentage of 34.2. It is interesting to note, however, that submarines completing their patrols during February scored hits with only 20.4% of their torpedoes, a figure 14% lower than that for the entire war. Of the 645 ships sunk, 566 were destroyed by torpedo fire, which represented 38.5% of those at which torpedoes were fired. Another item of interest is the decrease in distances required to arrive at and return from the patrol areas. Whereas the average for the entire war was 5083 miles, in February it was only 3450 miles, reflecting SEVENTH Fleet submarine operations through passes of the EAST INDIES closer to the home ports on the west coast of AUSTRALIA, and their use of SUBIC Bay for refitting between patrols.

189. Although submarines of the Pacific Fleet suffered a marked decline in sinkings from January to February, those of the SEVENTH Fleet found better hunting in February, sinking 78,758 tons of Japanese shipping and damaging 49,350 tons more, as contrasted with 18,520 tons sunk and 5,135 tons damaged in January. Enemy targets were divided as follows:

Ships Sunk: - (78,758 tons)

Combatant: - 1 DD, 1 DE, 1 PC, 2 Coast Defense Vessels.
Auxiliary: - 5 AO, 5 AK, 1 AP

Ships Damaged: - (49,350 tons)

Combatant: - 1 BB, 1 PC
Auxiliary: - 2 AO, 1 AK

Loss of BARBEL.

190. BARBEL (SS) was presumed lost when she became overdue from a war patrol in the area of BALABAG Island, off the southwest tip of PALAWAN Island in the PHILIPPINES.

Special Mission of PARGO.

191. Operating under orders of Commander Task Group 71.1, PARGO conducted a reconnaissance and bombardment of WOODY Island in the PARACEL Group, due east of TOURAINE, FRENCH INDO CHINA, on 4-6 February. Rough seas prevented PARGO from landing a reconnaissance party until 0435 on the 6th, after which the submarine submerged and patrolled the area watching the beach for any activity. At 0808 the shore party was picked up, and reported that the island was occupied by Japanese. In accordance with orders, PARGO then opened fire on shore installations, bombarding the island until 0903, when she cleared the area. During the bombardment, there was no return fire. The 4-inch and 20mm fire of PARGO destroyed the weather station and radio equipment, the administration building, the jetty, and several fishing boats, as well as damaging other structures.

Operations Against Japanese Task Force.

192. February operations against enemy combatant ships suffered a disappointing setback, when a Japanese task force consisting of ISE and HYUGA (BB/XCVs), ASHIGARA (CA), and 3 DD succeeded in making good their escape from the SINGAPORE Area to the comparative safety of EMPIRE Waters.

193. First reported off SINGAPORE by a long range search plane on 10 February, their departure was confirmed by the British submarine TANTALUS, which was forced down by aircraft and could not attack. Allied Air Force planes attacked on the 11th, but no reports of results are available.

194. On the 12th, off INDO-CHINA,,SEVENTH Fleet submarines (BLOWER and BERGALL) attacked with torpedoes, the former reporting one hit each in a BB/XCV and the CA, while the latter reported a probable hit in the other BB/XCV. Damage was evidently not serious, as the force was reported at 15 knots four hours later.

195. Pacific Fleet submarines were alerted and ordered to attack if possible. Poor visibility, however, aided the enemy ships, which succeeded in reaching EMPIRE waters without reported further damage.

G. ANTI-SUBMARINE OPERATIONS.

196. Enemy submarines were particularly active in the PHILIPPINES Area during the first two months of 1945. This was true especially of the LEYTE-HOLLANDIA and the LEYTE-MINDORO-LINGAYEN convoy routes. They sank one LST with heavy loss of personnel. Midget submarines of the KO HYOTEDI Class were located in the inland waters, and it was believed that one of these, operating in the VISAYAN Area, torpedoed the destroyer RENSHAW. It seemed possible that the presence of Japanese fleet submarines operating along our shipping lanes to the east and west of the PHILIPPINES might indicate a change of policy on the part of the enemy, and the beginning of an offensive campaign. At the same time, they may have been pressed into the service of evacuating key military and naval personnel stranded in the PHILIPPINES by the American advance.

197. Although there were no attacks on our ships in the ADMIRALTIES, Northern SOLOMONS, or NEW GUINEA Areas, there was evidence that enemy submarines continued to make reconnaissance patrols and supply missions in these waters. No definite reports of enemy submarines in Australian waters were received, but an American

merchantman was sunk by a German U-boat 800 miles west of AUSTRALIA, and a doubtful contact was reported in the vicinity of FRIEDRICH Reef.

198. During February, SEVENTH Fleet forces made at least seven attacks on submarine contacts, four of which were reported to have resulted in submarines sunk, and two in boats damaged. The destroyer escort THOMASON was credited with a submarine sunk west of LUZON on 7 February, and HAAS (DE) with another northwest of the PALAUS on the 15th. Two more submarines were reported sunk by naval aircraft in PHILIPPINE waters on 23 and 27 February.

H. LOSSES.

SEVENTH Fleet Losses.

199. Complete data on February SEVENTH Fleet ship losses are not available at this time, but from such information as is at hand the following estimate is made:

Sunk:

Combatant: - 2 PT, 1 SS
Auxiliary: - 1 YMS, 1 LCI, 1 LST

Damaged:

Combatant: - 5 DD, 1 DE
Auxiliary: - 1 AGP, 1 AM, 2 LST, 4 LCI(G), 1 ATF, 1 LSM

Enemy Losses.

200. The Commander SEVENTH Fleet estimates the following damage to the enemy fleet and shipping inflicted during February by forces under the Commander in Chief, SOUTHWEST PACIFIC:

Sunk:

Combatant: - 2 DD, 1 DE, 2 PF, 4 SS
Auxiliary: - 1 XAM, 7 AO, 12 AK, 3 AP, 1 XAO

Damaged:

Combatant: - 1 BB, 2 DD, 1 PC, 1 DE
Auxiliary: - 3 AO, 15 AK, 4 AP

Aircraft Losses.

201. Accurate figures for aircraft losses in the Southwest Pacific are not available at this time.

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I. LOGISTIC DEVELOPMENT.

General.

202. Augmentation of naval logistic facilities in the SWPA proceeded at an accelerated pace during February, with the rate of arrival of necessary equipment and materials as the principal limiting factor.

203. SUBIC Bay was made available at the end of January, and its favorable location and good harbor obviously favored its development as a major base for submarines and other fleet units, and as a staging base for naval and ground operations on LUZON, at least until such time as the port of MANILA could be developed.

204. LINGAYEN Gulf, which was originally expected to have a limited use, was designated as a port of entry, necessitating an increase in port installations there.

205. MANILA Harbor, which was opened to shipping late in February, was found so blocked by sunken ships that clearance was estimated to require the most extensive work of the kind ever undertaken anywhere.

206. The build-up of shore facilities at LEYTE continued at a somewhat faster rate during February, while some roll-up was evident in the rear areas of NEW GUINEA and AUSTRALIA. The Commander SEVENTH Fleet established Forward Headquarters at TOLOSA (LEYTE Island) on 8 February, leaving a rear echelon at HOLLANDIA.

207. Activities of the Service Force, SEVENTH Fleet, are briefly described below in connection with each of the above bases.

LINGAYEN Gulf.

208. For the LINGAYEN operation, since the nearest major concentration of tender and repair facilities was located at LEYTE, a comparatively large salvage unit and considerable floating repair equipment had to be provided. With the reduction of naval activities there, after the assault phase was completed, it was expected that naval use of the port would radically decline, and that Army use would not require the services of any extensive naval port installations. Due to later designation of LINGAYEN as a port of entry, however, an increase in naval installations beyond those in the operation plan was necessitated.

SUBIC Bay.

209 Development of base facilities at SUBIC Bay during February closely followed the operation plan. The use of pontoon piers for unloading of Navy material was necessary, although an Army pier had been completed.

210. A shortage of ARDs in the area held up docking of battle-damaged units in some cases for over a month, as well as precluding early docking of submarines at their advanced base. This situation also prevailed at LEYTE, due to heavy commitments there. A shortage of personnel also hampered operations at SUBIC, but was temporarily relieved by diversion of Fleet replacements to help out.

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211. In the devastated area selected for the repair unit, it was found that foundations and frames of wrecked buildings would still be useful, and would materially shorten construction time.

LEYTE Gulf.

212. The planned build-up of shore facilities for a large Fleet base at LEYTE was somewhat accelerated during the month, although hampered by rainfall which was heavier and more intense than anticipated. Lack of storage and unloading facilities ashore resulted in the holding of large amounts of material on board ships, to the detriment of both the work ashore and the shipping situation.

213. Piers at MANICANI and CALICOAN Islands were found to require more material than planned, due to extra pier length necessitated by coral heads and shoals near the water's edge, with the result that construction was retarded.

214. Replacement of tents by quonset huts was found advisable due to location of LEYTE Gulf in the typhoon belt.

215. Materials for an extensive fresh water system, and for a more elaborate electrical system, had to be ordered from the United States in order to accommodate the large personnel groups later expected to occupy the base.

216. The originally planned location of the repair unit on MANICANI Island was changed because of lack of shelter from the sea, even though the new location was less accessible to vessels using it.

217. The same shortage of floating drydocks which existed at SUBIC Bay also hampered repair of battle-damaged ships at LEYTE, and prospective arrivals did not appear to be sufficient to relieve the situation entirely. In LEYTE Gulf, facilities of Service Squadron 10 were now coordinated with those of the Service Force, SEVENTH Fleet, in performing work on vessels of both the Pacific and SEVENTH Fleets.

218. A new Fleet Recreation Center was being developed at OSMENA Village on SAMAR to relieve the previous situation, whereby more remote ships in the large fleet anchorage had to transport their liberty parties more than 15 miles to the Fleet Recreation Center at SAN ANTONIO, SAMAR. It was expected that further Fleet Recreation Centers would eventually have to be provided. The use of Nipa huts, and native type structures, with native help in the construction, considerably facilitated such development.

PART VII.

MISCELLANEOUS.

New Units.

219. The following ships reported for duty to Cincpac-Cincpoa during February:

Combatant types: TUCSON, SPRINGFIELD (CLs); COMPTON, SHUBRICK, DREXLER (DDs); CECIL J. DOYLE (DE); TRUTTA, LIONFISH, BULLHEAD (SSs); 10 AM; 1 PGM.

Auxiliary: 1 AS; 16 LCI; 12 APD; 4 APA; 22 LSM; 19 LST; 1 AF; 2 AOG; 1 AE; 1 AK; 2 ATA; 3 LCS; 1 AN; 3 ATR; 2 ATF; 1 LSV; 1 AGC; 2 DMS; 9 AKA.

Command Changes.

220. On 8 February, Rear Admiral M.R. Greer relieved Rear Admiral E. L. Gunther as ComAirSoPac.

221. Major General James T. Moore, USMC, became Commander, Aircraft, Fleet Marine Force, Pacific, on 23 February, vice Major General Francis P. Mulcahy.

222. Rear Admiral W. K. Harrill relieved Rear Admiral H. B. Sallada on 26 February as Commander Task Force 96 and ComMarGilsArea.

Attack on HYDROGRAPHER (AGS).

223. HYDROGRAPHER (AGS) had been anchored for three days approximately 1½ miles southeast of EIL MALK Island while engaged in surveying SCHONIAN Harbor, PALAU Islands, using her small boats. The night of 9-10 February was moonless, the sky was overcast, and a squall was approaching, when a sweep with the 24-inch searchlight disclosed two rafts and two swimmers almost dead ahead and drifting toward the ship in the wind. After general quarters had been sounded and preparations made for getting underway, HYDROGRAPHER's security watch commenced firing with small arms and two .30 caliber machine guns, apparently disposing of the swimmers, but having little effect on the rafts. The squall struck and the rafts were lost to sight.

224. Later the rafts were again observed, one on the starboard bow at 50 yards, and the other about 200 yards on the port bow. Close examination by a boat party revealed that the starboard raft carried a mine. This was exploded with 20mm fire. The other raft was found to contain no explosives, and it was concluded that its purpose had been as a vehicle for escape.

Loss of Plane with General Harmon.

225. On the morning of 26 February (ELD), Lieut. General M. F. Harmon, commanding General, Army Air Forces Pacific Ocean Areas, departed GUAM for OAHU via KWAJALEIN in his private airplane (a Consolidated B-24 four-engine bomber converted for passengers), with Brig. Gen. J. R. Anderson and Col. W. H. Ball of his staff, plus another passenger and the plane crew of six. At 1928 (Zone time) the flight departed from KWAJALEIN direct for OAHU, with an ETA of 1313 (Hawaiian time) next afternoon. This is one of the longest over-water flights in the world, 2135 nautical miles.

226. Two hours and 22 minutes after the take-off, KWAJALEIN received the last position report, in Lat. 11-15 N., Long. 174-15 E. A little less than four hours after the take-off, the plane was again heard from, but on account of garbles and interference on the circuit no position was received. All subsequent efforts to contact the flight by AACS at KWAJALEIN and JOHNSTON Islands were unsuccessful. Two hours after the plane was overdue at OAHU it was reported to the Deputy Cincpac and Cincpoa who declared an emergency, and directed a co-ordinated search by all arms and services.

227. A total of more than 3500 sorties by all available aircraft was made during the 20 days of the search. An unprecedented number of transports and itinerant aircraft and naval and merchant ships were diverted to pass along the track of the lost plane. All logical areas were searched repeatedly. Other areas that could conceivably hold survivors were carefully investigated. Native and uninhabited islands and reefs within the possible line of drift, or to which the missing plane might have headed, were repeatedly searched from the air at low altitude, and some of the more likely were visited by surface craft.

228. There were numerous reports of sightings of lights, mirror flashes, dye markers, rafts, debris, etc., though little coherent evaluation was possible. Every report was investigated, but with negative results. No evidence was found at any time which could be conclusively associated with General Harmon's plane. On March 16th, Cincpac-Cincpoa at GUAM directed that after 16 March (WLD) the search would be discontinued, but that transient ships and aircraft should continue to look for survivors.

229. The possibility of enemy action was not discounted, as there had been some indications of enemy planes in the area to westward of JOHNSTON Island, possibly from submarines, or from MARSHALL Islands bases still in Japanese possession. Strikes and reconnaissance missions were made on enemy bases, but no evidence of actual enemy air action was revealed. Weighing all the factors, including the large amount of our regular air traffic along this same route, it is considered improbable that this loss could have resulted from a planned attempt by the enemy to intercept a particular plane carrying a high-ranking officer.

ANNEX A.

THE CAPTURE OF IWO JIMA.

(NOTE: While the IWO JIMA Operation actually extended from the middle of February to the middle of March, when all organized resistance ended, the account of it for the whole period is included in this February report, since it was in February that the more sharply defined events and phases took place, although some of the hardest fighting ashore took place later).

General Strategic Considerations.

1. With the successful landing in LINGAYEN Gulf by forces of the Southwest Pacific Areas in January, domination of the PHILIPPINES Archipelago was assured; and while the forces of the Southwest Pacific Areas proceeded with the capture of MANILA, and the consolidation of positions and bases on LUZON, MINDORO and LEYTE, the ground and naval forces of the Central Pacific had prepared to move on the next objectives. These were IWO JIMA in the chain called NANPO SHOTO, which extends southerly from the TOKYO Area to the U.S.-held MARIANAS group; and OKINAWA in the chain called NANSEI SHOTO, which extends southwesterly from KYUSHU in the EMPIRE toward FORMOSA and LUZON. (See Plate XIV).

2. The line LUZON-MARIANAS formed the east and west base of a strategic, roughly equilateral triangle of which TOKYO was the apex, each point being about 1300 or 1400 miles from the others. The NANPO SHOTO, on the east side of the triangle, was composed wholly of small and dispersed volcanic islands, having no value in population or resources, but a high strategic value. They lay on the direct line of flight from the MARIANAS bases of our heavy bombers, whose bombing of TOKYO and other industrial cities and areas of the EMPIRE was a highly important part of our over-all plan for the defeat of JAPAN. Our long-range B-29s could make the flight to TOKYO and return, but they could not be given fighter cover for that distance. To minimize attrition on these strikes and to make it harder for the Japanese to stage through the NANPO SHOTO in counterstrikes, it became necessary for us to seize an air base at some intermediate point along the chain. The Joint Chiefs of Staff therefore directed the Commande in Chief, Pacific Ocean Areas, to occupy one or more positions in the NANPO SHOT

3. IWO JIMA was selected as the most satisfactory. It had three airfield two of which were operational and the third under construction. It was well located, being about 640 miles from TOKYO on the north and from SAIPAN on the south. It had no harbor or protected anchorage, its long axis lying about parallel to the direction of the prevailing northeast trade wind. There were no barrier reefs, but merely a few charted outlying rocks; and the beach slopes seemed to promise a "dry ramp" for landing craft. It was supposed to be heavily defended, but its small size, only about 4.5 miles in length by 2.3 in width, brought all areas of it within easy range of naval gunfire. Its capture and occupation had to be effected expeditiously in order to release shipping for the impending OKINAWA Operation.

4. In the description which follows, it is intended to portray the form and functioning of the operation as a whole, rather than to cite each and every participant therein. Omission or brief mention of the activities of any individual force, group, unit, sub-unit, or ship is not to be construed as

minimizing the part it actually played. On the contrary it may be assumed that each element functioned as indicated by its title or type; that its tasks were necessary to the success of the operation as a whole; and that it performed them in the highly creditable manner which was characteristic of all forces participating.

General Organization and Command Relationships. (See Plate V).

5. Directly under the Commander in Chief, Pacific Fleet and Pacific Ocean Areas, Fleet Admiral Nimitz, and in command of the Central Pacific Task Forces which comprised nearly all elements engaged in the operation, was Admiral R. A. Spruance, Commander Task Force 50, and Commander FIFTH Fleet, by which latter title he will be referred to hereinafter.

6. Not under Fleet Admiral Nimitz or Admiral Spruance, but co-operating by making searches over the Western Pacific, were the Fourteenth Air Force (based in the CHINA Theater), and air forces of the Southwest Pacific Areas. The Twenty-first Bommber Command (based in the MARIANAS) provided general support by reconnaissance and by attacks on targets in the EMPIRE.

7. Under Fleet Admiral Nimitz, and supporting the operation, though not under the command of the Commander FIFTH Fleet, were the following commands:

Submarine Force, Pacific Fleet - Vice Admiral C. A. Lockwood
Strategic Air Forces, Pacific Ocean Areas - Lt. Gen. M. F. Harmon, USAAF
North Pacific Force - Vice Admiral F. J. Fletcher
Forward Area Force - Vice Admiral J. H. Hoover
South Pacific Force - Vice Admiral J. H. Newton
MARSHALLS-GILBERTS Force - Rear Admiral H. B. Sallada
Service Force, Pacific Fleet - Vice Admiral W. L. Calhoun
Air Force, Pacific Fleet - Vice Admiral G. D. Murray
Army Forces, Pacific Ocean Areas - Lt. Gen. R. C. Richardson, USA

FIFTH Fleet Organization and Tasks.

8. The Commander FIFTH Fleet's Task Organization which follows is shown in his Operating Plan No. 13-44, which indicates merely the main echelons of command, and does not go into detail.

TASK ORGANIZATION.

(a) Special Groups.
50.1 Fleet Flagship - Captain C. B. McVay.
50.2 Relief Fleet Flagship - Captain W. M. Callaghan.
50.5 Search and Reconnaissance Group - Commodore D. Ketcham.
50.7 Anti-Submarine Warfare Group - Captain G. C. Montgomery
50.8 Logistic Support Group - Rear Admiral D. B. Beary.
50.9 Service Squadron 10 - Commodore W. R. Carter.

(b) 51 Joint Expeditionary Force - Vice Admiral R. K. Turner.
52 Amphibious Support Force - Rear Admiral W. H. P. Blandy.
53 Attack Force - Rear Admiral H. W. Hill
54 Gunfire and Covering Force - Rear Admiral B. J. Rodgers.
56 Expeditionary Troops - Lt. Gen. H. M. Smith, USMC.
(c) 58 Fast Carrier Force - Vice Admiral M. A. Mitscher.
(d) 94 Forward Area, Central Pacific - Vice Admiral J. H. Hoover.

9. The success of the expedition for the capture of IWO JIMA, like that of most others in the Pacific War, was less a matter of brilliant spur-of-the-moment tactical decisions than of the foresight, skill, and attention to detail with which its vast and complicated plan had been prepared, and of the inexorable power, timing, and determination with which it was executed. Some briefing of the functions of the various forces, groups, and units of the FIFTH Fleet as a whole will therefore be of assistance towards comprehending this plan, even though already known to those familiar with this and with past operations.

10. INDIANAPOLIS (CA) (TG 50.1), flying the flag of Admiral Spruance, operated as an independent flagship or with the task group to which assigned, as directed by the Commander FIFTH Fleet. She was part of Task Group 58.3 during the two carrier strikes against the Japanese mainland, and while at IWO JIMA performed fire support missions. MISSOURI (BB) (TG 50.2) was not called upon to function as a flagship, and remained with Task Group 58.3 throughout the operation.

11. The Search and Reconnaissance Group, (TG 50.5, Fleet Air Wing ONE), consisted of some 75 seaplanes (PBM, PBM-3D, and PBM-3R), and some 72 long range land-based search planes (PB4Y and PV-1), serviced by 5 AV and 5 AVP. These air forces and the cooperating air-forces of the Southwest Pacific Areas, operating from the semi-circle of bases formed by PORT DARWIN, MOROTAI, LEYTE, MINDORO, PALAU, ULITHI, and SAIPAN, covered in their daily searches from D minus 14 Day on a vast crescent extending from the north coast of AUSTRALIA almost to the coast of CHINA on the west and the Japanese mainland on the north. (See Plate XI). In addition, they provided air-sea rescue service, and offensive screens for our fast carrier raids and for expeditionary forces advancing towards IWO JIMA.

12. The Anti-Submarine Warfare Group (TG 50.7) consisted of ANZIO (CVE) and nine DE organized into two hunter-killer groups, available to ComFIFTHFlt for despatch to any point where a submarine contact had been made.

13. The Logistic Support Group, (TG 50.8, Rear Admiral D. B. Beary) (DETROIT (CL), flagship), was composed of the fleet oilers, ammunition ships, replacement transport CVEs (loaded with planes for replacing losses on combatant carriers), escort CVEs (for protection of the Logistic Support Group itself), general store ships, aviation supply ships (spare parts, etc.), towing and salvage ships, and the task group's screen of DD and DE. This Group furnished logistic support to units of the Central Pacific Task Forces while underway at sea. It therefore remained underway in areas where it could be beyond range of probable air attack from enemy held bases, and would be covered by our own mobile combatant forces, but close enough to the latter for quick rendezvous when replenishments were required. Its composition was constantly changing as ships discharged their cargoes and returned to bases for replenishment, being replaced in TG 50.8 by ships with full loads.

14. Service Squadron 10, (TG 50.9, Commodore W. R. Carter), was composed of a fluctuating total of about 250 auxiliary vessels of all kinds, which anchored in ULITHI lagoon, forming what was practically a floating but stationary Advanced Supply and Repair Base. Here ships moving to and from the combatant areas received practically every form of service that would be available at any Navy Yard or Supply Depot on the U.S. mainland, including dry-docking; and here vessels of any kind could be sheltered and serviced until required at the front. Initially assigned to it were the following:

6 AD
6 AFD
1 AFD(L)
3 AG
2 AO
6 AOG
1 APL
5 AR
3 ARB
5 ARD
4 ARG
1 ARH
1 ARS
8 ATF
2 ATA
3 ATO
4 ATR
1 DMS
6 IX (Liberty Tankers)
12 IX (Oil Storage)
12 IX (Issuing Barges)
2 IX (Barracks Ships)
15 YC
43 YF
17 YO
8 YOG
13 YOG(L)
2 YDG
5 YP
4 YR
2 YSR
10 YW
1 YRD(H)
1 YRD(M)
2 YSD
9 YTB
5 YTL
6 LCI
9 LCT
3 YG

15. The Joint Expeditionary Force (TF 51) comprised those vessels and forces engaged directly in the landing on IWO JIMA, or operating in its immediate vicinity. Composed of approximately 495 ships at its maximum, with over 111,000 troops, it formed the largest numerical part of the whole Central Pacific Force, and will be treated in detail later. (See Plate VI and IX for organization).

16. The Fast Carrier Task Force (TF 58) comprised all the fast carriers, all the fast battleships, and a large part of the cruisers and destroyers; a total at its maximum of 10 CV, 5 CVL, 2 CV(N), 8 BB, 1 CB, 3 CA, 12 CL and CL(AA), and 77 DD. It was the main fighting force of the Pacific Fleet, and its function was to cover the Joint Expeditionary Force against attempts at interference by Japanese air or surface forces, including strikes against the mainland of the EMPIRE as a deterrent to the former. It will also be treated in detail later. (See Plate X for organization.)

17. The Forward Area, Central Pacific (TF 94) comprised the air and surface forces based on SAIPAN, TINIAN, GUAM, ULITHI, and PALAU, which were the U.S.-held territories farthest towards the front and in closest supporting distance of the operation against IWO JIMA. The mission assigned to this force was to support the IWO JIMA operation with all available air and naval forces and base facilities; this included such varied tasks as air searches, air rescue missions, destruction of any enemy shipping and protection of our own, control of the anchorages and provision of logistic services at SAIPAN, GUAM, ULITHI, and PALAU, the routing and escorting of shipping moving from Forward Area bases, and eventually the responsibility for the defense and development of IWO JIMA when it should be captured. Forces available to the Commander Forward Areas included 3 CA, 15 DD, 12 DE, 16 AM, 1 AVP, 14 assorted auxiliary vessels of Service Squadron TWELVE, and a total of some 437 planes of various types.

18. It will be seen from the foregoing that the Central Pacific Forces under Admiral Spruance comprised two concentrated major combatant forces; the Joint Expeditionary Force which was to capture IWO JIMA, and the Fast Carrier Force which was to cover the operation and prevent enemy interference; plus several other groups of forces, smaller, more distant, or more widely dispereed. (See Plate V).

Joint Expeditionary Force (TF 51) Organization and Tasks.

19. Since this Force was the one which actually landed the troops and effected the capture of the island most directly, and was also most diverse in the functions of its numerous component groups, these latter will also be briefed as a means towards understanding the general plan. (See Plate VI).

20. Force Flagships - (EL DORADO, CTF 51; AUBURN, CTF 53; ESTES, CTF 52). It was demonstrated early in the war that a combatant ship was unsuitable for command functions in a landing operation, lacking space for all the additional equipment and personnel, and being withdrawn from its proper type functions. The AGC or Command Vessel, a large ship of the transport or cargo class, but fitted with all the equipment and facilities for exercising command, was therefore developed, and used in large amphibious operations as flagship.

21. Air Support Control Units - (TGs 51.10, 52.10, and 53.10). During a landing operation, and particularly in the early stages before airfields have been captured and air forces established ashore, air support must be furnished both from carriers necessarily maneuvering at some distance from the objective, and from the nearest U.S.-held air bases. Coordination and direction by some authority on the spot, familiar with the immediate situation and needs, and in close contact with the Force Commanders, is therefore a necessity. It is exercised by aviation officers of experience located on the force flagships, to whom air units report on arrival at the objective. On D plus 10 Day an Air Support Control Unit was established ashore for the better control of aircraft assisting the troop operations.

22. Expeditionary Troops (Task Force 56) - These troops under Lieut. Gen. H. M. Smith, USMC, comprised the following:

Headquarters, Expeditionary Troops.
56.1 Landing Force, (Maj. Gen. H. Schmidt, USMC,) composed of
    56.2 Assault Troops, (Maj. Gen. Schmidt), which executed the assault, and consisted of
        56.2.1 FIFTHMarDiv., (Maj. Gen. Rockey, USMC), plus attached units embarked in TransRon SIXTEEN (TG 53.1), and
        56.2.2 FOURTHMarDiv., (Maj. Gen. Cates, USMC), plus attached units, embarked in TransRon FIFTEEN (TG 53.2)
10.16 Garrison Force, (Maj. Gen. Chaney, AUS), embarked in Garrison Groups ZERO and ONE (TGs 51.6 and 51.7), comprising Infantry, Army Air Forces, AA Batteries, Aircraft Warning Battalions, Coast Artillery, Gropac 11, and other attached units. (See Note #).
56.3 Expeditionary Troops Reserve, THIRDMarDiv., (Maj. Gen. Erskine, USMC), plus attached units, embarked in TransRon ELEVEN (TG 51.1), which was committed early in the operation, and came under the commander of the Assault Troops.

# NOTE: A Garrison Force has to be kept intact to take over the defense and development of an island after its capture. Hence it is not supposed to take active part in the fighting. It starts landing in successive echelons as fast as the situation ashore permits, however, and takes over various functions. It therefore comes under the commander of the Landing Force until the capture of the island is completed.

Summary of Expeditionary Troops Employed.

	Aasault Troops		Garrison Troops			
	Army	Marine	Army	Marine	Navy	Total
Landing Force	570	70,647			3,927	75,144
Garrison Force			23,830	492	11,842	36,164
Total Troops Employed	570	70,647	23,830	492	15,769	111,308

23. Attack Force (Task Force 53) (See Plate VIII) - Roughly this comprised the following:

(a) All the transports, cargo vessels and LSDs of the two Transport Groups (53.1 and 53.2); all the LSTs of the Tractor Flotilla (53.3); and all the LSMs of the LSM Flotilla (53.4). These were the ships which carried troops, equipment, and supplies to the objective and put them ashore during the assault phase. Their total was not less than 30 APA, 12 AKA, 3 LSD, 1 LSV, 46 LST, and 30 LSM; plus appropriate flagships and escorts.

(b) The PCs and SCs of the Control Group (TG 53.5), which performed the highly important task of controlling the assembly, formation, and movement of the scheduled assault waves and other traffic in accordance with the Ship-to-Shore Plan, as well as various other services. Some 20 of these small craft were thus employed.

(c) The Beach Party (TG 53.6), which controlled the movements and unloading of all landing craft at the beaches, preventing confusion and congestion.

(d) The Pontoon Barge Causeway and LCT Group (TG 53.7. This comprised 28 barges and 6 causeway sets, carried on LSTs of the Tractor Flotilla (TG 53.3); and 12 LCTs carried to the objective on LSTs of TU 53.7.5; all with personnel to be launched at the objective and used to facilitate the landing of cargo.

24. Transport Screen (TG 51.2) - This group, comprising some 24 DD, 18 DE, and 5 DM, protected the transport groups during the forward movement and at the objective against air, surface, and submarine attack, and in addition transferred vessels to the Fire Support Group from time to time, in exchange for vessels whose bombardment ammunition was depleted.

25. Amphibious Support Force (TF 52) (See Plate VII)- This comprised various elements, which not only were to support the operation as a whole, but had special tasks to perform at the objective prior to D-Day, before the arrival of the Commander Joint Expeditionary Force. They were therefore organized as TF 52 under Rear Admiral Blandy. The following groups were included in TF 52:

26. Support Carrier Group (TG 52.2) - Rear Admiral Durgin. This group comprised 8 CVE screened by 7 DD and 11 DE, executing air support missions of all kinds at the objective, as well as supplying air protection to our shipping there. (See "Air Support At IWO JIMA").

27. Mine Group (TG 52.3) - Rear Admiral Sharp. This group comprised 1 CM, 4 DM, 6 DMS, 16 AM, 12 YMS, 3 SC, 1 PC, and 8 LCP(R), the latter transported on

two APs of TG 52.4. It also included the Net and Buoy Unit (TU 52.3.10) embarked in 1 AKN and 3 AN.

28. Underwater Demolition Group (TG 52.4) - Captain Hanlon. Four UDTs were embarked on the six APDs of this group to execute the pre-D-Day reconnaissance of the beaches, and to destroy any obstructions encountered, including mines in depths too shallow for the YMS to sweep.

29. Gunboat Support Group (TG 52.5) - Captain Aylward. (2 LCI(L), 12 LCI(G), 8 LCS(L)).

30. Mortar Support Group (TG 52.6) - Captain Rook. (1 LCI(L), 30 LCI(M)).

31. RCM and Rocket Support Group (TG 52.7) - Commander Coffen. (9 LCI(L)(3)-(RCM), 3 LCI(G)(RCM)).

32. The vessels of the foregoing three groups were all adaptations of the original 160' Landing Craft, Infantry, and were armed with guns, mortars, and rockets for close-in supporting fires. The RCMs carried rockets designed to project "window" as a counter to enemy's radar.

33. The Gunfire and Covering Force (TF 54), Rear Admiral Rodgers, comprised practically all the available gunnery strength of the FIFTH Fleet that was not with the Fast Carrier Force (TF 58) or engaged in screening. (See Plate VII for composition). It was reinforced from time to time by vessels from TF 58, which executed fire support missions and then reverted to TF 58. While the major task of TF 54 was this bombardment work, supporting the landing and the advance of the troops ashore from D minus 3 Day to the end of the operation, and although this fire support was under the direct control of the Commander Joint Expeditionary Force, Task Force 54 actually formed a strong and balanced gunnery force, ready at any time to assemble under Rear Admiral Rodgers, and although limited in speed by the OBBs, still quite capable of dealing with the whole Japanese Fleet had the latter by any chance evaded the Fast Carrier Force and threatened our shipping at IWO JIMA.

34. The Joint Expeditionary Force Reserve (TG 51.1, TransDiv 11), Commodore Loomis. This comprised some 13 APA, 1 AP, 4 AKA, 2 AK, with 5 DD and 3 DE screening. Embarked was the Landing Force Reserve (THIRD MarDiv, Maj. Gen. Erskine, USMC). This force was kept in areas removed from the objective until after D-Day, when some elements, and then the whole of the THIRD MarDiv, were committed ashore.

Defense Group (TG 51.5), Captain Sampson.
Garrison Group ZERO (TG 51.6), Captain MacGowan.
Garrison Group ONE (TG 51.7), Captain Lustie.

35. All three of these groups were loaded with echelons of personnel, equipment, and material which were not intended to participate in the assault, but would be required for the defense and development of the island while the battle was still in progress as well as afterwards. These echelons were ready to install and man A/A radar, A/A batteries, searchlights, coast defense guns, etc.; to repair airfields and prepare them for basing VF and VF(N) squadrons as soon as possible; to build roads and other facilities ashore and establish transportation, etc.

They included a GROPAC, which is the naval unit designed for establishing piers, nets if any, harbor defenses, and general port and unloading facilities.

Description of IWO JIMA.

36. IWO JIMA was an island of volcanic origin about 4.5 miles long by 2.3 miles wide, shaped roughly like a heart, acorn, or tear-drop, with its larger end to the NE, and its long axis running almost exactly NE and SW. Except for Mount SURIBACHI, an extinct volcano which rose some 560 feet in height at the extreme southwestern tip, the terrain was terraced rather than hilly, but nevertheless sloped upward rather sharply from the beaches, to the long interior plateau where three airfields had been leveled.

37. The character of the terrain was markedly different on the opposite sides of what might be called the "waist line" of the island (See Plate XII) and this difference had a considerable effect on the planning and execution of the operation. The southwestern half was composed almost entirely of a dry, coarse volcanic sand, with little vegetation and no natural cover of any sort except on Mount SURIBACHI. The sand sloped below water at a fairly steep gradient on each side of the island, with no rocks, reefs, or natural obstacles.

38. The northeastern half was rocky and irregular, cut up by caves and canyons; its shore line steep and rocky, and fringed by outlying pinnacles. There was nothing in the nature of a harbor on the island, the nearest semblance to it being about midway on the southeast side, where the larger end formed a shoulder as it curved in to meet the straight beach of the smaller end. With the prevailing northerly swells, and winds from the north and northeast, the southern beach was the obvious choice for landing, though an alternative plan was prepared for landing on the northwest beach in case of necessity.

39. IWO JIMA was known to have been heavily fortified with CD guns, AA artillery and numerous pillboxes, and the vulnerable beach areas had been organized with inter-locking defensive systems, from which mutually supporting fields of fire could be laid down. There were two finished airfields which could base both bombers and fighters, and one unfinished field. Several radar and radio stations provided a warning net. No naval facilities were present, but the island was garrisoned with a balanced organization of Army and Navy troops and construction personnel, the whole estimated at between 13,000 and 14,000 with about 1050 civilians.

Assembly and Movement of Forces.

40. The assembly of some nine hundred vessels in the HAWAIIAN Area, ENIWETOK, ULITHI, GUAM, and SAIPAN, and the co-ordinated movement of most of them to IWO JIMA and vicinity, was a task the magnitude of which speaks for itself. Factors tending to complicate it, in addition to the mere numbers involved, were:

(a) The different points and distances from the objective (4000 miles for those in HAWAII) at which vessels were initially distributed, either for loading troops and cargo, for exercises in training for this operation, or for rehabilitation after their last operation.

(b) The different intermediate staging points for various groups, and the necessary regrouping of vessels and units for different stages of the westward movement.

(c) The necessity for adequate protection of all groups en route against air, surface, and submarine attack.

(d) The necessity of moving groups by varying routes; both to mislead the enemy, and to avoid interference with each other.

(e) The conflict, in the assembly of groups, between vessels' speeds, types, functions, and designated time of arrival at the objective.

41. Thus the grouping of all forces for the forward movement, and the timing of their movements from different points at different speeds by different routes, so as to arrive at the objective simultaneously, or in the exact sequence and interval desired, was a monumental task. Fortunately the system for it had been developed by degrees through experience in previous operations.

42. The master plan for all movements was Com5thFlt's Movement Plan, an Annex to his Operation Order for the whole operation. This listed in text the exact movements of all forces, groups, and units in detail. A number of different routes and points along the routes were selected, and were given code names for simplicity and security. Separate movement charts, one for each day from D minus 4 to D-Day inclusive, were prepared, showing the exact movements and positions of all groups during the final approach to the objective. Finally, a master diagram on one sheet showed the movement and employment schedule for all forces from D minus 38 up to D plus 3. The system as a whole was practically fool proof.

43. It is impracticable to go into detailed recital of the movements of all forces in accordance with the foregoing, but some of them will be mentioned. Transport Groups ABLE and BAKER (53.1 and 53.2) and Tractor Groups ABLE, BAKER and CHARLIE (53.3.1; 53.3.2; 53.3.3) which were to carry the Assault Troops (TG 56.2) with their equipment and supplies, were loaded and assembled in the HAWAIIAN Area by 13 January, and held preliminary rehearsals there. The Transport Groups departed on 28 January; Transport Group ABLE following 25 miles astern of Transport Groups BAKER, each within a circular screen, but unaccompanied by heavy gun ships. They staged at ENIWETOK 5-7 February; arrived SAIPAN 11 February for rehearsals, logistics, and the transfer of certain troop elements to the Tractor Group there; departed 16 February, covered by Support Carrier Group THREE; and reached the vicinity of IWO JIMA on D-Day, 19 February. Tractor Groups BAKER, ABLE, and CHARLIE departed HAWAII on 23 January, in that order at 20 mile intervals. They staged at ENIWETOK 3-5 February; arrived SAIPAN 10 February for rehearsals, logistics and to receive troop elements from the transports; departed 15 February; and reached IWO JIMA on D-Day, 19 February.

44. The Gunfire and Covering Force (TF 54), comprising all the OBB, all cruisers not with the Fast Carrier Force, and all DDs not screening other units, accompanied by the Support Carrier Group (TG 52.2, 12 CVE, and screen) had been at ULITHI for interim upkeep and rearming. They departed on 10 February; arrived SAIPAN 12 February for rehearsal and logistics; departed 14 February (less Support Carrier Unit THREE); and reached IWO JIMA on 16 February (D-3 Day), being the first of our surface forces to arrive there. With TF 54 was the Underwater Demolition Group (TG 52.4), embarked in five APDs.

45. Mine Unit ONE (TU 52.3.1 and 52.3.2) (ANs, DMs, DMSs) had proceeded from the HAWAIIAN Area to SAIPAN with the Transport Groups; left them at SAIPAN 11-13 February; and reached IWO JIMA on 16 February (D-3 Day). Note that AMs, APDs, DMSs and all such special craft accompanying transports and cargo vessels were used to augment the screen of the formation.

46. Mine Unit TWO (the YMSs) had proceeded from the HAWAIIAN Area with the Transport and Tractor Groups; staged at SAIPAN 10-13 February, where it was joined by Gunboat Support Units ONE and TWO (12 to 14 LCI(G)s or LCI(L)s, TUs 52.5.1 and 52.5.2), which had come up from ULITHI; and both then proceeded to the vicinity of IWO JIMA, arriving 17 February (D-2 Day).

47. The foregoing does not purport to cover all movements of all forces, but only to indicate the general pattern. The movements of some other groups will be included in the account of their operations. No force arrived sooner than it was needed; and all troop and cargo carriers, after their discharge, were turned around as soon as practicable, since it is a cardinal principle of amphibious operations that shipping be localized and exposed at the objective for the minimum possible time.

Preliminary Operations at Objective, D minus 3 to D-Day.

48. In the IWO JIMA operation, all pre-D-Day operations at the objective were for the first time co-ordinated by an Amphibious Support Force Commander, (CTF 52, Rear Admiral Blandy) embarked in an AGC, and provided with the special facilities for making the preliminary bombardments and supporting tasks as effective as possible. Units for executing the shore bombardment were assigned to him from the Gunfire and Covering Group (TF 54, Rear Admiral Rodgers) in accordance with the bombardment plan.

49. The Commander Amphibious Support Group, in ESTES (F), AGC, proceeded from SAIPAN to IWO JIMA with TF 54, Carrier Support Units ONE and TWO, Mine Unit ONE, (Rear Admiral Sharp), and the Underwater Demolition Group, arriving on the early morning of 16 February. The operations for the day consisted briefly of (a) sweeping adjacent waters to within about 6000 yards of the shore; (b) gunfire at long range (above 12,000 yards) and medium range (6000-12,000 yards) with air spot for destruction of defenses and silencing of enemy batteries, (c) air strikes by support carrier aircraft, (d) examination of beaches from air by special hydrographic observers, and installation of a navigational light on HIGASHI IWA, a small rocky island 3000 yards to the eastward of IWO JIMA, and (e) a late afternoon fighter sweep by planes of the Carrier Support Units against CHICHI JIMA.

50. Fire support ships followed the mine sweeping units in towards the island, and then worked in assigned sectors, inside a screen of DD and APD which enclosed the island area. The APDs conducted visual reconnaissance of the beaches up to 3000 yards off shore. Two Japanese luggers were discovered and sunk by aircraft. Results of mine sweeping were negative, but one old mine was sighted and sunk. Excellent reports from air hydrographer observers indicated that beach and surf conditions would permit landings by any type of landing craft. There was no evidence of underwater defenses. Low ceilings and intermittent showers interfered with the bombardment and air strikes, and it was estimated that little damage had been done to major defenses.

51. A battery which opened fire on minesweepers from the northern flank of the southeastern beach was quickly silenced by fire support ships. No ships of the mine group were hit by gunfire, although GAMBLE was hit by two bombs on the 18th, and heavily damaged. Enemy heavy AA fire was not particularly intense nor effective, and fire of automatic AA was intense but generally inaccurate. All ships retired on the night of the 16th-17th, except four destroyers which were ordered to remain and provide harassing fire and illumination, interdict the use and repair of airfields, and prevent escape or reinforcement of the garrison.

52. Fire support ships returned to station and commenced the scheduled bombardment promptly at 0700 on the 17th. Mine Unit TWO, in company with Gunboat Support Units ONE and TWO, arrived from SAIPAN. A special air strike group of 12 VFs was launched by the Carrier Support Group against CHICHI JIMA at 0735. The Fire Support Ships closed the southeastern beaches at 0803 for close destructive bombardment, under cover of which Sweep Units FIVE and SIX proceeded with operations along the southeastern shore. At 0938 PENSACOLA, off the northwestern shore, was suddenly straddled by enemy shore batteries and hit by two shells of about 8" calibre, and four of about 6" and 3.5". Many casualties and considerable damage were sustained, but PENSACOLA continued to fire as she withdrew to extinguish fires and repair damage. She continued to execute her mission, ceasing fire from time to time while casualties were being operated on and given blood transfusions.

53. The mine sweepers had gallantly passed close along the southeastern shore in precise formation, firing as they went, without deviating from their prescribed tracks although under occasional enemy fire; and the last of them was completing the sweep off the eastern beaches when the Underwater Demolition Team reconnaissance commenced on schedule, supported by the gunboats. As these LCI(G)s moved in towards the southeastern beach, enemy fire began to concentrate on them. By 1105, when they were 1000 yards off shore, enemy fire was intense from both medium and minor calibre weapons on the flanks, and from minor calibre along the beaches. Quoting from CTF 52's report: "The personnel of these little gunboats displayed magnificent courage as they returned fire with everything they had, refusing to move out until forced to do so by material and personnel casualties. Even then, after undergoing terrific punishment, some returned to their stations amid a hail of fire, until again heavily hit. Relief LCI(G)s replaced damaged ships without hesitation". Between 1100 and 1145, all 12 of the LCI(G)s were hit, and the LCI 474 had to be sunk. LEUTZE (DD) was also hit, her Commanding Officer sustaining serious injuries.

54. Despite the heavy fire, the UDT personnel carried out their reconnaissance successfully. No UDT boat is known to have been damaged. One swimmer was not recovered and is believed to have been hit by enemy fire. The operation was completed about 1300, having disclosed that there were no underwater obstacles in the beach approaches, and that surf and beach conditions were suitable for landing. Similar reconnaissance was conducted on the western beaches, but with DDs furnishing support in lieu of the damaged LCI(G)s, and closing in to 2000 yards of the beaches. Enemy fire was less intense, there were no casualties, and the western beach was found unobstructed and suitable for landing.

55. The fire support vessels concentrated from short range on pill-boxes, blockhouses, etc. on the eastern beach area, and on defenses behind it and on each flank. Fire support ships were on station and delivering almost continuous fire from 0700 to 1830 on the 18th, at ranges of from 1800 to 3000 yards from the

shore. By late afternoon, all mine-sweeping necessary to permit a successful landing had been accomplished; and reports from firing ships and examination of photographs showed that the principal defense installations on and behind the eastern beaches, and on their flanks, had been either destroyed or heavily damaged.

56. Two batteries of coast defense guns flanking the southeastern beach had been extremely well concealed; and had they not disclosed their position prematurely by firing on the Underwater Demolition Teams and the gunboats on D minus 2 Day, disastrous consequences might have resulted on D-Day when the assault was made. Accurate and effective fire from the main battery of NEVADA at 2500 yards finally silenced one of these batteries on D minus 2 Day, but not before much damage had been done to the gunboats. On D minus 1 Day both these batteries were destroyed by IDAHO and TENNESSEE.

57. It is worthy of note that the defenders did not employ their heavier guns against minesweepers even when they worked close to the shore, possibly because there were no mines there, and the enemy considered that possible damage to our sweepers was not worth disclosing the position of their batteries. When the LCI(G)s approached the beach in support of the UDT, however, the Japanese opened up with everything they had, possibly assuming that the UDT landing craft were carrying troops and were about to land.

The Assault.

58. The Attack Force (TF 53), with other units of TF 51 not already at the objective, arrived off the southeastern beaches of IWO JIMA prior to daylight on D-Day, 19 February, and took station for debarking the Landing Force (TF 56.1). At 0600 the Amphibious Support Force, TF 52, which had been at the objective since D minus 3, passed to the direct command of CTF 51.

59. The two Transport Groups hove-to in the Transport Areas about 15,000 yards off the southwestern beaches; Transport Group ABLE, carrying the FIFTH Marine Division, on the left and to the southwest; Transport Group BAKER, carrying the FOURTH Marine Division, on the right and to the northeast. Tractor Groups ABLE, BAKER, and CHARLIE, (LSTs), proceeded to the Tractor Group Areas nearer the Line of Departure. The Transports lowered their LCMs and LCVPs and debarked their troops into them. The LSTs and LSMs debouched their LVTs, LVT(A)s, DUKWs, etc., into the water; and the initial waves formed up at the Line of Departure, which was parallel to and about 4000 yards off the southeast beaches.

60. Supported by intense naval gunfire and air bombardment, the first waves struck the beaches almost exactly at H-Hour (0900), as scheduled, landing over practically the whole length of the southeastern beaches on a front of about 3000 yards. Only a small amount of gunfire was received in the boat lanes during the approach. Heavy mortar and artillery fire soon developed on the beaches and boat lanes, however, with some fire in the LST areas. As in practically all our landings except TARAWA, the strongest opposition developed after the beach had been secured, and it was a question not of the enemy being able to throw us back, but of how much they could make the ultimate victory cost us.

61. The adverse beach conditions soon became apparent. With the steep gradient, the surf broke directly on the beach, and it was impossible to keep some of the landing craft from broaching. With each wave, boats would be picked up bodily and thrown broadside onto the beach, where succeeding waves swamped and wrecked

them and dug them deeply into the sand, beyond hope of salvage in most cases. Losses had to be accepted until the beachhead was secured, and LSTs, LSMs, and LCTs could be employed. The resultant accumulation of wreckage piled higher and higher, and extended seaward to form underwater obstacles which damaged propellers, and even bilged a few of the landing ships. Several 105mm howitzers loaded in DUKWs were lost en route to the beach due to the rough water.

62. The coarse dry volcanic sand, with which the southwestern half of IWO JIMA was covered, had appeared from seaward to be hard-packed, but actually had no cohesive consistency. Its steep gradients permitted landing craft to beach with practically a "dry ramp", but this advantage was more than nullified by the sand itself. Troops debouching from the landing craft struggled up the slopes ankle deep in it. Wheeled vehicles bogged to their frames. A few tanks stalled in the surf and were swamped. Even tracked vehicles moved with difficulty. The first terrace had a 40% slope which proved insurmountable for some amphibious tractors. As vehicles left the ramps they immediately sank down, and their spinning treads then banked the sand back under the ramps causing the latter to lift gradually; this making it harder for each succeeding vehicle. Some improvement was made by laying Marston mat on the beaches; and later,it was found that clay, hauled from a clay-pit on the island and spread over the sand, formed with the latter a harder surface than either material alone.

63. LSTs and LSMs were sent in to the beaches as soon as the beachhead was secured, but they too had difficulty in keeping from broaching. Several failed when anchors did not hold. Tugs were in constant attendance to tow them clear. Unloading continued day and night, with the Beach Parties working "around the clock". To alleviate the surf problem on the beaches, and to permit continued employment of boats, it was decided to launch the pontoon causeways, but they could not be employed successfully. All attempts to anchor the seaward ends were unsuccessful. Like the small boats, they also broached, were damaged and sank, or ran adrift; and in either case became a menace to navigation. It was finally decided to launch the LCTs (loaded and transported on the LSTs), and to employ only these craft plus LSMs and LSTs for unloading, and to close the beaches to craft smaller than LCTs, since the larger craft were less likely to be broached by the surf than the smaller ones. The only exception to this was the employment of amphibious vehicles, which worked very successfully for the evacuation of casualties.

64. The UDTs and Beach Parties cleared the beaches of accumulated wreckage. The Service and Salvage Groups cleared the beach approaches, salvaged boats and pontoons, and effected emergency repairs to damaged ships. These were herculean tasks and proceeded concurrently with the unloading, the replenishment, the evacuation of casualties, and the rendering of support fire.

The Battle Ashore. (See Plate XII).

65. D-Day, 19 February - The over-all plan called for the FOURTH and FIFTH Marine Divisions of the Landing Force (TF 56.1), under Maj. Gen. Schmidt, to land abreast in that order from right to left, over the full 3000 yard beach front between Mount SURIBACHI on the left and the beginning of the high ground on the right. The FOURTH Division was then to pivot to the right. The FIFTH Division was to cross over the narrow lower end of the island and then wheel right, except for one Regimental Combat Team (RCT) 28, which was to pivot left against Mount SURIBACHI.

The eventual front of the two divisions had to extend across the long axis of the island and face towards its NE half, in which the enemy's main forces and defenses were concentrated. (See Plate XI).

66. The Expeditionary Troops Reserve - (THIRD MarDiv, TG 56.3) was to remain in the transports of the Joint Expeditionary Force Reserve (TG 51.1), under the control of CTF 51. RCT (Regimental Combat Team) 26 was to be held out of the FIFTH Division at the scene of the landing, under control of the Landing Force Commander. This was modified later due to the probability of enemy resistance stronger than at first anticipated. RCT 26 reverted to the FIFTH Division at 0955 on D-Day and was landed; and its place in Corps Reserve afloat was taken by RCT 21 of the THIRD Marine Division, released from the Expeditionary Force Reserve.

67. Initially, troops received light opposition on the beaches, and under cover of a rolling barrage of naval gunfire, moved inland rapidly to a depth of 350 yards. As expected, heavy opposition developed almost immediately from the high ground on both flanks, and the only substantial gain initially was to the front.

68. The FIFTH MarDiv on the left advanced rapidly across the narrow part of the island, capturing the SW end of Airfield No. 1 by noon; pivoting their left Regimental Combat Team (RCT 28) to the SW at 1330 against Mount SURIBACHI, and extending the rest of the division's lines to the NW coast.

69. The FOURTH MarDiv on the right, advancing across the steep and open slope leading up to Airfield No. 1, suffered heavy casualties from frontal and enfilading fire by enemy machine guns and mortars, and from mines which were emplaced inland from all beaches. Although reserve battalions were committed to press the attack, the FOURTH MarDiv was unable to expand its beachhead beyond the initially established gains.

70. Eight assault battalions were ashore by 1030, and tanks had begun landing as early as 0930. By 1440, four regimental combat teams and both divisions' tank battalions had been landed. One battalion of division artillery was ashore by 1600; and by 1800 elements of four artillery battalions were ashore. By nightfall, all the assault elements of both divisions had been landed, plus a portion of the artillery and other supporting arms, to a total 30,000 men landed for the day.

71. At 1800, with the forces facing generally north and northwest in the vicinity of the No. 1 airfield, the Corps Commander ordered the divisions to dig in for the night, preparatory to resuming the advance on the following morning. Although the beachheads had been established, the lines as held were vulnerable to counter-attack, particularly in the center along the edge of the airfield and on the right flank. (See Plate XI). There was contact with the enemy during the night on the edge of the airfield, and intermittent small arms, mortar, and artillery fire all along the front, but no counter-attack was delivered against the more vulnerable parts of the line. About 0230, approximately 1000 of the enemy attacked against the right of the FIFTH MarDiv zone and were repulsed.

D plus 1 Day.

72. At 0830, D plus 1 Day (February 20), after a preparatory bombardment

by carrier aircraft, surface vessels, and field artillery, and with the continued direct and general support of these arms, the attack was resumed. Against heavy opposition on the right flank from the high ground south and east of Airfield No. 2, and from enemy positions in and around Mount SURIBACHI in the south, our troops gained from 100 to 500 yards during the day, captured Airfield No. 1, enlarged the beachhead, and shortened and rectified the main front so that it now ran more nearly normal to the axis of the island and was less vulnerable to counter-attack. (See Plate XII). Limited progress was made by RCT 28 against Mount SURIBACHI. Elements of all eight battalions of divisional field artillery and one battery of 155mm were landed, and supported the attack with preparatory concentrations, rolling barrages, harassing fires, counter-battery, and effective precision registration in general support. The division tank battalions supported the advance continuously, although 20% to 30% of the tanks were reported to have been destroyed or damaged during the first two days.

73. The beaches were continually under heavy fire from both flanks, which hampered unloading, and caused many casualties and the loss of considerable equipment, ammunition, and supplies. The volcanic sand surface continued to be a major problem. It flowed almost like a liquid. Tent guys had to be made fast to sand-filled bags, since tent-pegs or stakes would not hold. Any sort of fox-hole, trench, embankment or excavation had to be completely revetted with boards, matting, sandbags, or something of the kind to keep it from caving in; otherwise only a saucer-shaped depression could be dug. Naturally it was a major task to keep bolt-actions, breech-mechanisms, etc., free of sand and in working order.

74. During the night of D plus 1 Day, enemy tanks and infantry exerted pressure against our left, but were repulsed by the FIFTH MarDiv. Thereafter, opposition to the landing force at night consisted of the following: heavy calibre fires delivered against rear areas until our own artillery was able to provide effective counter-battery; sniper fire from over-run positions; one instance of a counter-landing in small numbers; infiltration attempts which decreased in intensity as the attack progressed; and intermittent fire against our front lines, where continuous contact was maintained with the enemy.

75. Capture of Mount SURIBACHI and Airfield No. 2 - RCT 28 of the FIFTH MarDiv was engaged in the attack against Mount SURIBACHI at the SW end of the island. Small advances were made on D plus 1, but on D plus 2 and 3, the regiment with full coordinated support, and employing flame throwers and demolitions, advanced against stubborn opposition and succeeded in surrounding the base of the mountain. On the morning of D plus 4, February 23, two battalions climbed to the rim and surrounded the crater, while a third battalion continued to reduce enemy positions around its base. At 1035 the American flag was raised on its summit, and Mount SURIBACHI was secured except for the mopping up. This dominating position was actually not strongly defended once the positions at its base had been reduced, but its capture eliminated enemy observation and fire from our rear, permitted freer use of the southern beaches, cleared the southern end of the island for the landing of Corps and Garrison elements, permitted the release to other tasks of the troops assaulting it, and gave us a useful observation post.

76. During the seven days between 21 and 28 February a concerted effort was made to breach the enemy's heaviest defensive installations in the vicinity of Airfield No. 2. Before D plus 5, the THIRD MarDiv (Expeditionary Troops Reserve) had been committed, and had taken over the center of the line between the FIFTH MarDiv on the left and the FOURTH MarDiv on the right; and all three Division

Commanders, as well as the Commanding General V Amphibious Corps, had established their command posts ashore. By the end of D plus 7, all of Airfield No. 2 was under control. During this stage of operations, the THIRD MarDiv's position in the center along high ground enabled it to support the advance of the FOURTH and FIFTH MarDivs through the more difficult terrain sloping to the sea on either flank. Base development began with the clearing and reconstruction of Airfield No. 1 (the SW field) on D plus 6.

77. Capture of MOTOYAMA and Airfield No. 3 - Having breached the enemy's main defensive positions in the vicinity of Airfield No. 2, the Corps continued to press the attack in a northeasterly direction towards the village of MOTOYAMA and Airfield No. 3. The accelerated pace in this sector, and the greater speed of the FIFTH MarDiv on the left flank than that of the FOURTH MarDiv on the right flank, where heavy opposition and terrain features limited the gain to 1500 yards in 25 days, made the whole advance a wheeling movement pivoting on the extreme right. This, however, represented a general expansion of the beachhead in all directions on the commanding MOTOYAMA plateau in the island's center area, from which the flanks could be supported. As the front lines advanced, and lengthened with the broadening of the "tear-drop", from 10 to 18 battalions were deployed in assault across the Corps front, although all were considerably under strength.

78. By D plus 9 (28 February), OY aircraft could be based on Airfield No. 1 for artillery spotting missions, and on D plus 11, a 4000 foot runway had been completed on No. 1 Airfield and was reported ready for fighter plane operation, and although still subject to occasional artillery fire, could receive transport planes. Control of air support passed to the Landing Force Control Unit ashore on D plus 10, and was effectively conducted by that unit until the conclusion of the operation. Airfields Nos. 1 and 2, although completed by the Japanese, had not been heavily enough surfaced to take some of our larger planes, and in addition had been almost completely torn up by our bombings and shell fire.

79. On D plus 9, the THIRD MarDiv captured the village of MOTOYAMA in an advance of 800 yards in the Corps center, and by the end of D plus 12, the commanding MOTOYAMA tableland and the last of the three airfields were under our control.

80. Capture of the Northeastern Shore - On D plus 13, the first B-29 made a forced landing successfully on Airfield No. 1, and thereafter, following increasing strikes against the EMPIRE, more of such aircraft landed on IWO JIMA. On D plus 15 (6 March), the first land-based fighters came in, were employed in patrols the following day, and relieved carrier aircraft in effective close support of troops on the third day after arrival. Airfield No. 2 was operational on 16 March.

81. From D plus 13 to D plus 21, efforts were concentrated in an attack to secure the eastern shore of the northern plateau. Little progress was made in the first five days, despite the artillery preparation which was supplemented by main battery naval gunfire and air strikes. On the night D plus 17-18, the FOURTH MarDiv destroyed between 500 and 1000 enemy troops, who had organized a major infiltration. After this, the resistance to our attack towards the beaches greatly diminished; and during the next three days, the THIRD and FOURTH MarDivs secured control of all the eastern coast line to a distance of approximately 4000 yards south of KITANO Point.

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82. Capture of KITANO Point, and End of Organized Resistance - The FIFTH MarDiv, which was deployed on a line running generally east-west 500 yards south of KITANO Point, had encountered heavy resistance from difficult terrain to the front, and had been unable to effect appreciable gains. One battalion of the THIRD MarDiv held the right flank of this line between the division boundary and the eastern coast. On D plus 22 (13 March), this battalion advanced its lines to the division boundary. During the next three days, all supporting arms were employed in reducing the defenses of KITANO Point; and on 16 March, the FIFTH MarDiv and elements of the THIRD MarDiv, attacking NW across the point, had reached the NW shore. Considerable mopping up remained to be done, particularly a small stubborn pocket of resistance in one of the rugged gulches running SW to the beaches from KITANO Point; but on 16 March (D plus 25), all organized resistance was declared ceased as of 1800, and the FOURTH MarDiv started re-embarking.

83. On 14 March the flag was raised officially, and the establishment of military government was proclaimed. On 18 March, the FIFTH MarDiv re-embarked. On 20 March, the 147th Infantry Regiment of the Garrison Force arrived. At 0800, 26 March, responsibility for the defense and development of IWO JIMA passed to the Garrison Force and the Commander Forward Area, Central Pacific. The capture of the island had taken 26 days of actual combat; over 20,000 enemy troops were destroyed; and our casualties, as reported on 17 March, were 20,196, of which 4,305 were killed in action.

84. General Character of the Ground Fighting - The enemy had been well prepared to meet us, since there was neither strategic nor tactical surprise in our landing. With LUZON and the MARIANAS in our hands, the seizure of some point in the NANPO SHOTO chain was our obvious strategy; and IWO JIMA was by its location and character the most profitable objective. Its small size, and the type of its terrain, made landings feasible on only two beaches of limited extent, which were so situated relative to each other that one defensive organization could readily be devised to oppose an assault against either or both of them.

85. The defensive organization of IWO JIMA was the most intelligent and complete yet encountered. The size and terrain of the island afforded the enemy singular advantages. Landings had to be made in the south on beaches which were flanked by terrain favorable to the defenders. Artillery, mortars, rockets, and all high-angle-of-fire weapons could be registered on the beaches, and, in fact, on any point in the island. Observation on an attacker's beachhead in the south could be had from a number of commanding hills throughout the northern plateau. The rugged volcanic crags, severe escarpments, and steep defiles sloping to the sea from all sides of the MOTOYAMA table-land, afforded excellent natural cover and concealment, and lent themselves readily to the Japanese technique of subterranean positions.

86. The exceptionally defensible natural features of the ground were heavily reinforced with extensive excavations, tunnels, systems of connected alternate positions, concrete blockhouses, covered emplacements for artillery, rockets, and mortars, pillboxes, and firing positions of all sorts, covering all possible approaches. Caves 300 feet underground were found; and subterranean galleries, one of which was 800 yards long. On setting off a charge to seal what appeared to be the only entrance to an underground position, the force of the explosion blew out and revealed half a dozen other entrances which had hitherto defied detection.

87. The flat coastal plain along the central western beaches, commanded by high ground in the north, and flanked by a ridge line to the east, and the almost impassable cross-compartments east of Airfield No. 2 all tended to "canalize" any attack in a northeasterly direction along the bump of the island where the airfields were located. This ground was consequently most heavily defended; and a main line of resistance consisting of mutually supporting, heavy underground concrete blockhouses, bunkers, pillboxes, and reinforced caves, organised in depth, was established in that sector. As many as a thousand of these installations were discovered and reduced in one 800-yard area south of Airfield No. 2. Anti-tank and anti-personnel land mines were also employed; and were covered by enfilading flat-trajectory fires and previously registered artillery, mortar, and rocket barrages. A final reserve line of resistance was organized in a similar manner in the ravines and ridges of KITANO Point to the north.

88. The enemy conducted a position defense which was effective, intense, and notable for its economy of forces. No employment of mobile reserves was encountered. There was no withdrawal through a series of defensive lines; there was in fact no significant exposure of enemy troops to our supporting arms. The defense depended on the employment of the maximum number of weapons of all calibres fired from well concealed and protected positions, until they were destroyed. In the initial stages, during darkness, the enemy probed our lines in considerable strength, employing smoke to cover his concentrations. This activity declined to limited infiltration attempts as our attack progressed. The decentralized sector defense was complete rather than flexible.

89. In spite of the high toll it exacted, the defense failed to realize the full value of its weapons. The decentralized employment of artillery resulted in failure to coordinate or mass the fires of its many weapons where they would do the most good, or to transfer fires from registered targets with accuracy and despatch to the many targets of opportunity. It is worthy of note that once the beachhead was established, the majority of casualties to our assault elements were caused by the intense and accurate small arms fire -- including grenades and knee mortars -- rather than by heavier artillery.

90. Limitations of Our Own Associated and Supporting Arms - The capture of IWO JIMA would have been impossible without the preparatory bombardment and the continued support of fire-support vessels and carrier and land-based aircraft, supplementing the artillery, rockets, tanks, and organic infantry weapons of the landing force. The enemy's heavier installations were frequently impervious to field artillery of light and medium calibres, and required the destructive power of high-velocity main battery naval gunfire. Artillery ashore was employed both for its destructive effect and to uncover and reveal the location of the many well-camouflaged and concealed defense positions. All supporting arms, however, were handicapped by the character of the terrain and the strength and concealment of the enemy defenses.

91. The broken configuration of the ground served to mask observation from ground positions, and the natural and artificial concealment of enemy positions made air spotting difficult. The proximity of our troops to enemy positions frequently denied us the benefit of adequate naval bombardment, air bombing, or shore artillery support. The coarse volcanic sand at the landing beaches combined with the nearly impassable topography of the northeastern half of the island to impede the progress of tanks; and armored bulldozers had to be used to clear approaches. The tanks, armed with 75mm guns and flame throwers, together with

self-propelled 75mm anti-tank guns and other anti-tank weapons, were fired at point blank ranges. The result of the foregoing limitations was that the burden of reducing many fortified positions fell to infantry armed with organic weapons, flame throwers, and demolitions.

Casualties U.S. and Enemy.

92. The high casualties experienced during the operation seriously reduced the combat efficiency of the assault elements. Companies and battalions, deprived of leaders and key personnel, frequently fought with less than 50% of their effective strength. The compensation for the loss in combat efficiency lay in the unflagging offensive spirit and absolute courage displayed by the troops.

U. S. Casualties (19 February-23 March).

Unit	Killed	Wounded	Missing	Total
THIRDMarDiv	848	3218	54	4120
FOURTHMarDiv	1731	6058	74	7863
FIFTHMarDiv	1946	6345	166	8457
CORPS Troops	9	94	3	106
CORPS Artillery	5	11	0	16
GARRISON Force	51	228	4	283
Totals..........	4590	15,954	301	20,845

Enemy Casualties (19 February-23 March)

93. Prisoners of War - Japanese 154; Korean 58; Total 212; Civilian Internees none.

94. Enemy Dead - Officially counted and buried, 13,234. Estimated sealed in caves or buried by the enemy 8,070. Total enemy dead 21,304.

Fire Support During Operation.

95. It is impracticable herein to give any detailed account of the fire support missions, either in day-by-day chronology or by citing each of the large number of ships participating. Not only did all ships of the Gunfire and Covering Force, (TF 54) take part, but some of the battleships, cruisers, and destroyers from the Fast Carrier Force, (TF 58),and many destroyers from the screens of other groups and units. The employment of so many vessels was not to increase the volume of fire, since only a relatively small number of ships can bombard effectively at the same time, owing to difficulties in spotting and communications. But although bombarding ships fire slowly and deliberately for the same reasons, continuous firing soon depletes their magazines; and it is thus desirable to have a large number of ships loaded with bombardment ammunition at the beginning of the operation, and to have them rotate in firing and in replenishment from the AEs. All ships of course have to retain a percentage of their regular ammunition allowance against the eventuality of action against enemy surface forces.

96. Resupply ammunition was carried in assault transports, LSDs, and LSTs. A large amount of 5"/38 cartridges and 4.2" mortar ammunition was pre-loaded in

34 LCMs in the MARIANAS. These LCMs were in turn carried within the LSDs; and upon arrival at the objective were launched, ready to transfer ammunition to the fire support ships as needed. This scheme was very successful. The following tables show the amounts of ammunition expended and replaced at IWO JIMA by naval forces:

Expended	16"HC	14"HC	12"HC	8"HC	6"HC	5"AAC	5"Star	5"Rkt	4"5BR	4"2Mtr
D-3, 2, 1		3300	1000	3500	1900	14,000	200			
D-Day	1950	1500	400	1700	2000	31,000	1,500	12,000	8000	20,000
D plus 1-17	450	900		6200	4500	102,000	13,000		2000	50,000
D plus 18-35				300		5,000	3,000			
Total Rds.	2400	5700	1400	11,700	8400	152,000	17,700	12,000	10,000	70,000
Tons Expd.	2280	3640	520	2,020	440	4,160		270	145	875
Rds.Resupp.		400		6,700	2750	73,500	6,300			32,000

97. A total of 14,250 tons of ammunition was fired by naval forces, as compared with 10,965 in the capture of SAIPAN, the highest previous figure.

98. Practically all enemy fixed installations capable of firing upon the landing beaches or transport areas and boat lanes were well covered, and were either destroyed or neutralized prior to How-Hour, as evidenced by lack of opposition to the landing of the first waves on all but Red beaches. A few were later put back into commission, and caused trouble for short periods. Harassing fire and deep supporting fire were provided almost continually to interdict enemy movements and disrupt communications. Air bursts were not used as extensively as in the MARIANAS Operation, due to the inclination of the enemy to remain in prepared positions rather than come out in the open.

99. The following comments from the Commander Gunfire and Covering Force (Rear Admiral Rodgers), are briefed:

> "It was obvious from the outset that the enemy defensive situation was one of the strongest yet encountered in this theatre; and that blockhouses, pillboxes and caves were constructed not only to meet a land attack but to withstand heavy naval gunfire. Moreover, the enemy must be credited with unusual and painstaking concealment of vital defenses and gun positions. Our intelligence photos were good, but they could not be expected to show what neither the eye nor the camera lens could see. Against such defenses, long or medium range gunfire simply is not effective, and a tremendous amount of ammunition can be wasted in general area fire.
>
> "The reasons are two-fold: first the above mentioned concealment and camouflage make the location of targets possible only at very close range; observation from the air is not very effective for this purpose. Secondly, even when discovered, targets are so re-inforced by a mass of earthworks that extremely heavy close range fire is required to uncover them before the essential job of destruction is begun; area fire seems to have had a very limited effect in this regard. Though a certain amount of general area fire is necessary initially to shake up the enemy and permit approach to closer ranges, doctrinal trust in neutralization fire may have to be revised.

> "Observation of the medium range bombardment executed on D minus 3 Day showed little damage; and the hard unpleasant fact must be acknowledged that direct hits must be scored repeatedly. This necessitates close, point-blank ranges and acute observation. Naturally this involves the threat of enemy coast-defense guns, but the risk of hits from them may have to be accepted to do the job. At IWO JIMA, enemy fire on our heavy ships was unexpectedly light, even though firing positions less than 2000 yards off shore were frequent after D minus 3 Day."

Fire From Japanese Shore Batteries.

100. Japanese shore battery fire was notable for its inconsistency. On 17 February (D minus 2 Day), it was heavy and effective. PENSACOLA (CA) was hit six times, LEUTZE (DD) once, and 10 of the 12 LCI(G)s covering the Underwater Demolition Teams were hit from once to several times; one of them being sunk. Thereafter the Japanese fire with heavy guns against ships off shore was sporadic and unpredictable. This would not be unnatural, considering the intensity of the bombing and bombardment to which the whole island was subjected during the following days. In general, only an occasional splash from a shore gun could be seen, landing so far from any target as to suggest that there was no control left for such guns as could still load and fire. Yet, on occasion they would open up with unexpected accuracy. As an example, on 28 February, while TERRY (DD) was methodically delivering call fire at a range of about 7000 yards, a battery of two or three guns on the northeast end of the island suddenly opened and straddled her several times, making one hit of around 6" calibre which wrecked one engine room completely.

101. There is definite evidence that the defenders realized that they could not "slug it out" with our huge preponderance of gun power afloat if the location of their fixed batteries was once disclosed, and that they restricted their fire to short bursts that might damage a favorably placed target without divulging their own position. In this they were favored by the character of the terrain, by their admirable skill at camouflage and concealment, and by the superior smokelessness and flashlessness of their powder. This strategy was doubly effective in the case of their light guns and mortars used against our troops ashore, since these weapons could be run quickly in and out of caves and other covering, and after firing from one position could disappear to open fire again from another.

Night Retirements and Turn-Around of Shipping.

102. Amphibious operations on the scale developed in the Pacific War necessarily "localize" a large number of vessels of all types at the immediate scene of the landing over a considerable period. Hence the enemy's planes, submarines, and surface forces, if bent on attacking our shipping, do not need to conjecture where it may be found, or undertake any wide searches for it; they have only to proceed to the scene of the operation, with the certainity of finding valuable targets in plenty if they are themselves able to get there. It is therefore a basic principle of our amphibious operations not only to provide strong protection against all forms of attack at the scene of the landing, but to minimize the risk further by having ships there only when and so long as their presence is definitely required.

103. Naturally the concentration of shipping is greatest on D-Day and for a few days thereafter; although certain echelons, such as Troop Reserves and parts of the Garrison Forces, are not brought to the objective until progress of the assault requires them to be landed. After D-Day, as fast as ships can be discharged at the objective, or as soon as their function is completed or can be taken over by elements ashore, they are turned around in groups and sent back under escort to rear areas for reloading and rehabilitation. Thus, for example, carriers and seaplane tenders can depart when air forces have been established ashore, and have taken over the air support, searches, and general protection; and transports when their troops and cargo have been discharged.

104. Ships required at the objective, but in daytime only, are formed into retirement groups with appropriate escort and screen each evening, and retire along prescribed courses during the night, arriving back at the objective at daylight next morning to continue their unloading, fire support, or other functions. Many ships which are to maintain continuous unloading or to finish interdiction or harassing fires during darkness, remain at the objective all night, protected by the destroyers and other vessels which screen the whole objective area.

105. So effective was this program during the IWO JIMA operation that no ships were damaged by submarine attack, either during the main forward and rearward movements, or at the objective or during the night retirements. Several were damaged by air attack, and BISMARCK SEA (CVE) was sunk. No enemy surface craft made even a threatening gesture toward our shipping at the objective.

106. The same considerations which necessitate the quick discharge and turnaround of all shipping engaged in an amphibious operation, also make the speedy completion of the troop operations ashore of vital importance from a naval standpoint. The longer the fighting ashore keeps up, the longer will there be a large number of ships "localized" at the objective; and this in turn will increase the probable number of them damaged, and will curtail the time available for them to return to rear areas, reload, rehabilitate, and be ready for the next operation.

AIR SUPPORT AT IWO JIMA

Air Forces Involved.

107. Both ship-based and land-based aircraft directly supported IWO JIMA amphibious operations.

108. As indicated in Plates VII and X, the carrier force employed in furnishing direct support was the Support Carrier Group (TG 52.2), under the command of Rear Admiral C. T. Durgin (9 to 11 CVEs, and after D plus 2 Day, 1 CV(N)), and two of the four day task groups of The Fast Carrier Force (TF 58), operating on alternate days from 19-22 February. Land-based planes were PB4Ys, B-24s, and P-38s from the MARIANAS, until the south IWO landing field became operational, when planes began to operate from there. Seaplanes operated off IWO JIMA during the period from D plus 8 to D plus 15. Additional aircraft for spotting were furnished by cruisers and battleships, while OY observation planes operated both from CVEs and from LST 776, which was equipped with Brodie launching and recovery gear. Except during the period when the fast carriers were present, principal support was furnished by planes of Task Group 52.2.

109. As in previous operations, control of aircraft at the objective, irrespective of the force from which they come, was under a coordinating command. The regular procedure was to have aircraft from the carriers fly to IWO JIMA at specified periods and report to this coordinating command, at which time they would be assigned a specific mission, or instructed to proceed with the mission for which they had previously been briefed. Until early on the morning of D-Day, this command was the Advance Commander Air Support Control Unit embarked in ESTES. This was the first occasion upon which such an advance unit was embarked on an AGC with a complete team. From D-Day until 1 March, Commander Air Support Control Unit in EL DORADO was charged with air control at the objective. Thereafter until 11 March, when carriers had left the area, a similar control unit which had been set up ashore, known as Landing Force Air Support Control Unit No. ONE, exercised operational control of all close air support missions. This operation represented the initial test under combat conditions for personnel and equipment of this land-based unit.

Planning and Rehearsals.

110. Planning of air support for the IWO JIMA operations started as early as November 1944, and included conferences to obtain coordination between representatives of the ground forces, artillery, naval gunfire, fast carriers, CVEs, and Army Air Forces. Among other things, these resulted in preparation and dissemination of improved maps for air support work. While the CVEs and fast carrier forces were awaiting sortie from ULITHI, Commander Air Support Control Units and his assistants briefed pilots scheduled to participate in the direct support operations on the principal phases of their tasks. Fortunately both CVEs and fast carriers, while en route to their objectives, were in the MARIANAS Area on the 12th and 13th of February, and final rehearsals simulating the tasks to be accomplished by air forces at IWO JIMA were carried out there. All of these preliminary efforts are reported to have contributed toward smoother functioning of air support when the assault commenced.

Tasks Assigned.

111. Tasks assigned to the escort carrier groups were similar to those executed in prior operations, and included force and objective area combat air patrols, direct support of the troops, special missions for photography, DDT spraying, smokers, anti-submarine patrols, and transportation of air observers (for artillery fire, beach hydrography, and tactical conditions), air coordinators, and search and rescue missions. There were two types of air support rendered at IWO JIMA which had not existed in prior amphibious assaults. The first of these was the provision of a specially trained CVE squadron for use primarily as naval gunfire spotters. The second was the provision of a night carrier for dusk, dawn, and night patrols. WAKE ISLAND (CVE) provided the spotters, and ENTERPRISE (CV), (with assistance from SARATOGA (CV) before she was hit) provided the night cover.

112. To these direct support missions at IWO JIMA, it was necessary to add a sufficient number of attacks by planes from land bases and carriers to maintain the neutralization of CHICHI JIMA as an airbase.

Preliminary Attacks on IWO JIMA - June 1944 to February 1945.

113. As had been indicated in reports of Cincpac for prior months, IWO JIMA as well as the BONIN Islands had been targets for increasingly heavy air attacks by land-based aircraft from the time MARIANAS airfields became operational. These were interspersed from time to time with raids by carrier based planes, and by bombardments by surface ships.

114. A summary of this effort to neutralize IWO JIMA prior to February follows:

	Bomb Tonnages by Land-Based Planes	Bomb Tonnages Carrier Planes	Surface Ships Bombardments
June 1944	0	88	None
July 1944	15	120	4 July
August 1944	290	30	None
September 1944	379	101	None
October 1944	220	- -	None
November 1944	659	- -	11 November
December 1944	2385	- -	8,24,27 December
January 1945	1845	- -	5 and 24 January
Total to 1 February 1945..	5793	339	7 bombardments

115. As has been pointed out elsewhere in this ANNEX, the enemy had, during the months preceding invasion, taken very thorough measures to go underground. As a result, the increasingly heavy attacks by B-24s, and the surface ship bombardments, failed to destroy many of the well protected enemy installations or materially soften the island up for invasion; but after 2 January they did discourage the Japanese sufficiently to prevent them from launching air attacks from IWO JIMA on our MARIANAS bases. The cost to us of all these attacks is reported to have been 9 B-24s and 1 B-29 lost with their crews, and 243 B-24s damaged.

116. The heavy bomber attacks were augmented by night anti-shipping sweeps by PBJs which made a number of successful attacks in attempting to interdict the flow of supply shipping to IWO JIMA.

117. The early strikes by carriers, together with intermittent P-38 attacks, contributed toward destruction of enemy aircraft, but had very slight effect in breaking up defensive land preparations.

Preliminary Air Attacks 1-15 February.

118. Throughout the first 15 days of February, the Army Air Forces had on hand and operational an average of 97 B-24 aircraft whose operations were devoted to attacks on IWO JIMA. These flew 636 sorties during those 15 days, a slightly higher number of attacks per available aircraft than had been attained during December and January. The long range from which the B-24s were compelled to operate, and the relatively small force available, made it impossible to keep the five Japanese runways entirely inoperational for over 24 hours at a time. These missions were sent out at varying times, usually in formations of 9-11 planes,

and arrived over IWO JIMA for the most part in the afternoon. At night, "heckler" missions continued attacks to prevent repair of the airstrips. Principal attacks were made on February 1st, 2nd, 8th, 9th, 10th, and 14th; while one B-29 strike by 21 aircraft dropped 84 tons on the 12th. Nine enemy planes were destroyed during this period, while our losses were 2 P-38s and 1 B-24.

119. On 3 February, F-5 photographic planes took low angle obliques of the landing beaches, SURIBACHI Mountain, and designated strips across the island. One of these planes was shot down, but the mission was completed on about D minus 10. These photographs, plus others taken by PB4Ys at medium altitudes, were all delivered to InterpRon TWO for further delivery to Commander Task Force 51. The photographic coverage of IWO JIMA provided by carrier planes, F-5s, and PB4Ys was superior to that obtained in any prior operation, and proved most useful.

120. In addition to B-24 and photographic flights, these first 15 days of February saw a continuation of the night PBJ anti-shipping missions which had been carried out during previous months. Contacts were made on the nights of February 6th and 10th, and rocket hits scored; but as usual in these night attacks, results were not definitely determined. One PBJ failed to return. There were also a substantial number of P-38 sorties to IWO JIMA, escorting either B-24s or photographic planes.

Air Support, D minus 3 to D-Day.

121. With the Fast Carrier Force engaged in attacking TOKYO, the air support at IWO JIMA, during the three days preceding the landing, was furnished by aircraft from the CVEs of Task Group 52.2. Principal missions were support of minesweepers and underwater demolition teams, as well as destruction of gun emplacements, AA batteries, and other defenses (particularly those on Mount SURIBACHI from which flanking fire could be directed on the landing beaches).

122. The missions flown followed quite closely the operation plan, which called for the following flights:

(a) A combat air patrol of eight VF over the objective from 0600-1830.
(b) An anti-submarine patrol of six VF from 0730-1730.
(c) Successive strike groups of eight VF and eight VT reporting on station every 1½ hours, starting at 0730 and continuing until 1630.
(d) Aircraft equipped to make smoke as necessary to protect UDTs and minesweepers.
(e) One air coordinator maintained on station.
(f) Photographic planes with escorts to obtain low-angle obliques of the landing beaches, SURIBACHI Mountain, and the high ground north of the beaches, as well as vertical coverage of the entire island.

123. Task Units 52.2.1 and 52.2.2 (9 CVEs) accompanied other ships of Task Force 52 to the objective area, arriving southwest of IWO JIMA early on the morning of 16 February. Except during the latter part of the operations, the escort carriers operated from 30-60 miles off IWO JIMA to the west and southwest. The weather for flying was consistently bad in the morning, preventing effective completion of a mission to CHICHI JIMA, of the photographic mission, and of support at IWO JIMA. Afternoon strikes, however, were more successful, strafing a few planes found on the airfields, and starting the destruction of defense positions.

124. On the 17th, and 18th, scheduled missions were flown, and in addition, successful attacks were launched against the BONINS, where several planes were found and strafed on the ground, and some small shipping was sunk. Weather on the morning of the 18th interrupted the flight schedule for a time.

Air Support on D-Day.

125. On D-Day, the Fast Carrier Force had returned from TOKYO, and two of its groups (58.2 and 58.3), with the CVEs (augmented by two additional CVEs which arrived with the assault forces), were in position to support the landings. Fortunately, the weather for flight operations was good, and the full schedule of air support could be used as planned.

126. This support was planned to consist of the following principal types of missions:

(a) Combat air patrol of 24 VF on station from 0600-1800. (Half from CVEs, half from fast carriers.)

(b) Dusk combat air patrol of 12 VF(N) from night carriers.

(c) Night combat air patrol of two VF(N) on station all night.

(d) Six VT on station from 0730-1730 for anti-submarine patrol from CVEs.

(e) One air coordinator from CVEs from 0730-1745.

(f) Sixteen planes (half of them VF) from CVEs, and a like number from the fast carriers, available every 1½ hours, from 0730 to 1745 for called strikes on enemy batteries, command posts, and other installations specified by Commander Air Support Control Units and the Air Coordinator.

(g) At How-Hour minus 60 minutes, six VT (from CVEs) equipped to lay smoke were to be made available if required.

(h) At How-Hour minus 30 minutes, two air observers (from CVEs) were to be over the objective to report the ground situation and the distance of LVTs from the beach.

(i) Thirty-six VF, 18 VB, and 18 VT from the fast carriers to be on hand to bomb, rocket, and heavily attack landing beaches and flanks of the beaches from How minus 55 to How minus 45. These attacks were to be divided into three groups; one bombing the eastern and northeastern slope of Mount SURIBACHI; a second hitting the right flank of Blue Two landing beach; and the third (and heaviest) strike attacking trenches, pillboxes, and other installations along the landing beaches to a depth of 500 yards.

(j) Forty-eight VF from the fast carriers were to make a napalm and rocket attack from How minus 45 to How minus 35, and continuously strafe landing beaches from the time landing craft were 800 yards off shore until the first wave hit the beach. Strafing was to be by successive two-plane sections parallel to the beach, with intervals between sections as short as possible. As the boats neared shore and troops landed, these attacks were to be moved gradually farther inland.

(k) At 1200 propaganda leaflets were to be dropped.

(l) Field artillery spotters were to be available when called for after artillery was ashore.

(m) One VT for photographic missions was to be on station.

(n) In the afternoon, 36 VF, 18 VB and 18 VT from the fast carriers were to report for attacks on bivouac areas, and to assist in breaking up anticipated counter-attacks.

(o) Two PB4Y aircraft were to be on hand to take motion pictures of the landings.

127. As can be seen, the foregoing was a heavy schedule requiring close timing, and (considering the small area being subjected to attack) requiring close coordination and planning to make it effective. During the Pre-How Hour strike period, over 230 aircraft were on station and under the direct control of Commander Air Support Control Units. These pre-landing attacks are reported to have been particularly well executed, except that many of the napalm tanks which were dropped failed to ignite. There were 27 direct support missions flown during the day, involving 468 aircraft. The effectiveness of Pre-How-Hour strikes, combined with the other measures taken at that time, is indicated by the lack of enemy opposition to the first landings.

Air Support After D-Day.

128. Direct Support - The scale of direct air support given to ground troops during the period, from D-Day to D plus 23 (14 March) when air support was withdrawn, is indicated by the following figures:

Total sorties flown on direct support missions..........	4,186
Total missions flown in direct support..................	318
Total aircraft rockets expended.........................	11,623
Total bomb tonnage dropped..............................	1,096

129. During this period, carriers were on station to furnish support as follows:

(a) Two Task Groups of the Fast Carrier Force from 19-22 February.

(b) Two CV(N) on 19, 20, and 21 February; and one thereafter until 7 March.

(c) Eleven CVEs from 19 February to 7 March; except from February 22nd to the 26th, when only 7, and sometimes 6, were present. On 8 March 9 CVEs were present; on the 9th, 10th, and 11th, 4 were present; and thereafter, P-51s based at IWO JIMA continued support until 14 March.

130. In general, the extent of the support was adequate, though there were a number of occasions when this was not so. This was due to the fact that the fast carriers were required elsewhere; and fueling, losses, bomb shortages, and weather occasionally interrupted the operations of CVEs.

131. The types of missions flown by aircraft on direct support missions were in general similar to those outlined above for D-Day strikes, except that special strikes, such as the Pre-How hour attacks, were not flown after the fast carriers left IWO JIMA.

132. By far the largest number of missions flown was by the strike groups which reported on station every hour and a half. The attacks by these planes were augmented by those of other planes which first had completed either gunfire spotting missions or combat air patrols.

133. The inherent difficulty which pertains to effective direct air support of ground troops was more apparent at IWO JIMA than had been the case in the past. Pilots and air observers were unanimous in their complaints about the difficulty of visually locating the assigned targets. This was due principally to the rugged terrain, supplemented by effective camouflage, and to the tendency

of the enemy to make maximum use of caves and underground shelters for housing of personnel and equipment. This situation inevitably resulted in delay in carrying out requested attacks, and made assessment of damage therefrom more than usually difficult. It was generally slightly more than one hour, from the time a request for support was received from air liaison parties, until it was evaluated by the support control unit, the strike ordered, the target located by the strike pilots, and the attack executed. Nevertheless, the support rendered by these aircraft unquestionably contributed much toward the ultimate success of the difficult land campaign. The coordination of the strikes by aircraft with naval gunfire and artillery did not prove as difficult as had been anticipated. Work in the joint operations room, combined with the fact that in later strikes high ordinate naval gunfire was not used, frequently enabled aircraft to attack without interference, provided they stayed above a specified minimum altitude. This latter factor likewise prevented difficulties with shore-based artillery. The liaison between shore-based artillery and air strikes was reported to be less effective than was the case with naval gunfire, due mainly to delays in communications.

Miscellaneous Missions After D-Day.

134. Anti-Submarine Patrols - Six TBMs from CVEs were on station during daylight hours for the purpose of flying anti-submarine patrols. The plan used was apparently effective, since, although enemy submarines were present, no reports indicate that a successful attack was made by them on any of the numerous ships in the objective area. At night, from D-Day on, ANZIO (CVE) with her escorting ships provided anti-submarine patrols. During this period, until relieved by shore-based planes, ANZIO aircraft made three contacts, two of which were probably submarines. A mine dropped on one attack was reported to have resulted in heavy explosions, and further search by surface vessels proved negative. This contact was evaluated as a possible kill. Less persuasive evidence of destruction existed in the case of the other submarine contact.

135. Observation and Spotting - The innovation of providing naval gunfire spotting planes from carriers proved helpful. Not only did they add to the number of spotters available, thereby particularly assisting destroyers which would otherwise have been without them, but use of CVE fighter planes had the following additional advantages as compared to float planes:

(a) Fire support ships were not required to manuever to launch or recover planes, and in case of rough seas the difficulties of recovery of seaplanes were avoided.
(b) VOF could remain continuously on station, working in relays.
(c) The speed and manueverability of the CVE aircraft permitted them to fly lower with more safety from AA, as well as better to defend themselves in case of attack.

136. These advantages were considered enough to justify the innovation, despite the facts that the lack of close personnel contact between ships and pilots required "briefing" by radio after the plane was on station; that the VOF pilots were not as familiar as VOS pilots with the particular ordnance equipment and capabilities of the ship for which they were spotting; and that the rotation of these planes both consumed time while reporting on station, and tended toward

making the individual pilots less familiar with the important targets in the block of target areas assigned a particular ship. The operations of artillery and observation planes proved to be more hazardous than other missions. Three planes carrying air observers, one TBM artillery spotter, and two OS2U Naval Gunfire Planes were shot down by AA, and others were hit. The vulnerability of TBMs flying low and slow over the front lines was again indicated. The services of these aircraft, as well as the OYs, were, however, necessary and well performed. A total of 12 OY-type observation planes, operating both from CVEs and LST 776, were employed at IWO JIMA. On 19 and 20 February, SARATOGA provided a night air tactical observer over IWO JIMA to report gunnery and troop movements. This was the first occasion on which such an observer had been furnished.

137. Air-Sea Rescue - Air-sea rescue incidents, in which pilots were down in the water somewhere in the objective area, totalled 30. In two-thirds of the cases where there were survivors, personnel were rescued. One incident required GREGORY (DD) to go close inshore at CHICHI JIMA, where a successful rescue of an aviator and two crewmen was effected despite considerable fire from coastal defense batteries on the island.

138. Other Missions at IWO JIMA - In addition to the type of flights indicated above, carrier aircraft commenced the spraying of DDT on D plus 9, and continued to do so thereafter. The use of this insecticide again proved its worth. CVEs provided photographic planes, and completed numerous message drops and administrative flights. After D plus 9, land planes dropped supplies; and after D plus 12, when an R4D landed on IWO, evacuation of wounded and delivery service commenced on an extensive scale, despite continued anti-aircraft fire.

Operations of Land-Based Planes at IWO JIMA.

139. The small size of the island, and the large number of ships in the area, combined with poor weather conditions, prevented execution of a considerable number of the originally scheduled missions against IWO JIMA by B-24s from the MARIANAS. From D-Day until the end of February, 31 sorties dropped 53 tons of bombs on the island in support of the troops. Bombing from 3000-5000 feet was possible without undue interference from anti-aircraft fire so long as naval gunfire was being delivered at AA positions. Before the island was secured, 57 sorties were completed with drops in the assigned areas. Bombing was under the control of the appropriate commander of air support control units.

140. P-51s of the garrison air force began direct support operations from the south IWO JIMA field on 8 March, and continued on until 14 March, at which time further air support ceased to be required. This support enabled the CVEs to be withdrawn to prepare for the OKINAWA operations. The P-51s flew 125 sorties, mostly low-level strafing attacks in direct support of ground forces, expending 40 tons of bombs and 40,000 rounds of .50 calibre ammunition.

Operations of Patrol Planes. (See Plate XI).

141. Patrol planes and tenders of Fleet Air Wing ONE (TG 50.5), under Commodore Ketcham, supported the IWO JIMA operations by providing long-range searches, furnishing naval observers to accompany B-29s on their picket boat searches in advance of the Fast Carrier Force, providing anti-submarine patrols, a floating seaplane base at IWO JIMA, and other incidental activities.

142. HAMLIN (AV) and CHINCOTEAGUE (AVP) departed GUAM on 19 February to establish a floating operating base for seaplanes on the southeast coast of IWO JIMA, from which VPB-19 (a PBM squadron) and RescRon 2 (a PB2Y squadron) were to operate. The establishment of the seaplane base was not possible until 24 February, since until that date this area was under fire from Mount SURIBACHI. For four days thereafter, sea conditions and crowded conditions at the proposed seaplane base prevented seaplane operations. By 28 February, however, the first of twenty-seven 500 mile seaplane searches to the northward of IWO JIMA commenced, and these searches continued thereafter until 6 March,, when the IWO JIMA strip was put in operation sufficiently to stage PB4Ys for such searches. The operating conditions at IWO JIMA in the seaplane area were much hampered due to the lack of an effective lee, by adverse wind conditions, by floating debris of all sizes and natures, and by the intrusion of large and small craft in the seadrome area. With the use for the first time of JATO (jet assisted take off devices) and light gasoline loads, searches were successfully carried out, daily press release material was delivered at GUAM, and needed emergency supplies (including 192 cases of whole blood and mail) were delivered. Only one seaplane was lost, when it missed a buoy and went aground; while on the searches one small Japanese craft was sunk and another damaged. The task group also served as a haven for rescued personnel and wounded, and rescued four crewmen of a sinking LCM.

143. After the time the landing field on IWO JIMA became available, 1200 mile searches from TINIAN to the coast of HONSHU were made possible, and were carried out by PB4Ys using IWO JIMA as a staging base on the return leg.

Neutralization of the BONINS.

144. The SUSAKI Airfield, and the seaplane base on CHICHI JIMA (the only air bases in the BONINS), had been both bombed and bombarded during previous months; but on the first of February they were still operational, and capable of staging enemy aircraft for attacks on our amphibious forces. The difficulty of keeping an air strip unserviceable by bombing from long range without expenditure of excessive air effort had been illustrated at CHICHI JIMA, as it had in so many instances from RABAUL to IWO JIMA. Anti-aircraft defenses at CHICHI JIMA were plentiful, and fire from them was more than usually accurate, making daylight attacks there costly. Nevertheless the position of the BONIN Islands 150 miles north of IWO JIMA, supporting as they did the SUSAKI Airfield, made it imperative that enemy air effort launched from CHICHI JIMA be hindered as much as possible for the protection of our forces at IWO JIMA

145. To prevent interference from enemy planes using CHICHI JIMA, it was planned to launch carrier attacks on these bases during the first days of the IWO JIMA invasion, and thereafter to harass the enemy by further carrier strikes, night "heckler" missions by MARIANAS B-24s, and by dawn and dusk attacks by aircraft from a CV(N). When the IWO JIMA field became operational, further neutralization was to be shifted from carriers to the garrison air force based on IWO JIMA. In general, this plan was carried out.

146. Commencing on the 12th of February, B-24s from Task Force 93 were sent over CHICHI JIMA virtually every night until the end of March for the purpose of striking SUSAKI Airfield. These flights were made by individual aircraft taking off at successive intervals so as to arrive over the target from 2000

to the early hours of the morning. From four to nine of these flights were made nightly, the average number being about six. Usual bomb loadings were 100-pound GP bombs interspersed with fragmentation clusters and butterfly bombs. Bombing altitudes were normally 9000 feet and above. The results of this night bombing from such altitudes were generally unobserved. In addition to these night sorties, B-24s flew five daylight missions involving 49 aircraft to CHICHI JIMA in February. Only two of these missions, however, were directed against the airfield. Both search lights and anti-aircraft fire proved ineffective on these night missions, and attempts at interception were not in evidence.

147. BONIN Islands targets, and particularly SUSAKI Airfield, received comparatively heavy attacks during the period from 17 February to 23 February until the Fast Carrier Force left the area for the second TOKYO strike. On the 17th, 18th, and 19th, special strikes from CVEs were over CHICHI JIMA. On the 18th, 20th, 21st, 22nd, and 23rd, sweeps or strikes from the fast carriers hit the island. The first attack by CVE aircraft on 17 February found the most profitable targets, and strafed five planes on the ground, as well as exploding a small transport and nine small craft. On the 18th, a deck load strike by Task Group 58.1, with one by Task Group 58.4, found a few planes on SUSAKI Airfield, destroying or damaging them, as well as dropping 108 tons of bombs and firing numerous rockets. Remaining attacks by the fast carrier groups were fighter sweeps which, while they made it impossible for the Japanese to keep planes regularly based at CHICHI JIMA, did not crater the fields sufficiently to prevent future operations.

148. From 24 February until she left the area on 9 March, ENTERPRISE (CV(N)) sent daily dusk missions of 4-10 VT(N) and VF(N), occasional dawn missions, and a few small strikes over CHICHI JIMA. These destroyed one plane in the air, two on the ground, and damaged some of the small shipping remaining in BONIN Island Harbors. These strikes usually arrived just after darkness, and often under poor visibility conditions. While they had a harassing effect, they were not in force sufficient to prevent enemy use of SUSAKI Airdrome except during the time the attacks were actually in progress.

Enemy Air Reaction.

149. The reaction of the Japanese air forces to the amphibious assault on IWO JIMA was very limited. During the two or three days before the landings, the few enemy planes at IWO JIMA and CHICHI JIMA were effectively dealt with. A few were observed by ships on the 16th, 17th, and 18th. HALLIGAN (DD) and TWIGGS (DD) each shot down a plane. On the 18th, occasional enemy aircraft appeared in the night retirement area 10 miles north of IWO JIMA. One approached low and fast at 2125, and succeeded in scoring two bomb hits on GAMBLE (DM), as a result of which five men were killed or missing and nine suffered wounds. The ship was seriously damaged. At about the same time, BLESSMAN (APD) received a 500-pound bomb hit from a low-flying Betty. Serious fires occurred, but with the aid of GILMER (APD), these were controlled, and BLESSMAN was towed safely back to port. Fifteen of BLESSMAN's crew were killed.

150. On the night of 19 February, between 1900 and 2200, Task Groups 58.3 and 58.2 were operating approximately 75 miles NW of IWO JIMA when an attack by 12-15 enemy planes developed. As the attack commenced, there was a bright moon. Task groups were maneuvered into cloud cover, and ships of Task Group 58.3 made smoke intermittently. At least two enemy planes were shot down, one

by MISSOURI (BB) and one by HUNT (DD), while an ENTERPRISE VF(N) destroyed a third. None of the enemy attacks were effectively pressed home, and by 2200 the screen was clear.

151. The only heavy raids which the enemy launched, during the time that operations at IWO JIMA were continuing, occurred on the night of 21 February. For the most part, these attacks were directed at the CVE-CV(N) groups which were operating to the north and east of IWO JIMA, though a few smaller raids appeared near other ships of the amphibious force. It is estimated that 30-50 enemy planes were involved, all of which are believed to have come from the EMPIRE, rather than from CHICHI JIMA.

152. SARATOGA (CV(N)) had been operating with the fast carrier force until the morning of the 21st, at which time she was directed to report to Commander Task Group 52.2, to furnish night patrols at IWO JIMA and "heckler" missions at CHICHI JIMA. She was screened by three destroyers, and arrived in the operating area to the northwest of IWO JIMA about 1530. At 1628 a bogey was picked up at 055°, 75 miles, estimated at four to six planes. This was evaluated as friendly. Nevertheless, two divisions of CAP were vectored out, and estimates of the size of the enemy raid were increased. One division made contact with four Zekes, two of which were shot down. SARATOGA catapulted additional fighters, so that by the time the first attack on her occurred at 1700, 14 VF(N) and one VTB(N) had been catapulted. At 1700, the first of four enemy planes, which were to crash on the SARATOGA in the next few minutes, hit the starboard side of the ship. In addition to these suicide crashes, a bomb from another plane also struck SARATOGA, and a second bomb or torpedo hit her starboard side. All four of the suicide planes were hit and burning before crashing the ship, while a fifth plane was shot down while approaching. As a result of these hits, SARATOGA took a 5° list, her catapults were made inoperative, her flight deck was holed, there were two holes on the starboard side, and some of her radars were out of commission. She could not at that time recover aircraft. By 1814, fires on the bow were under control and SARATOGA was proceeding south at 25 knots. At 1845, after sunset, three more enemy suicide planes commenced a second attack on this carrier. Two of these were shot down, and the third dropped another bomb on SARATOGA's flight deck; then crashed over the side to port.

153. SARATOGA ultimately was able to recover some of her own planes, and others landed on other carriers. The next day, ENTERPRISE aircraft were sent on a search for lost SARATOGA pilots; and when in bad weather they approached IWO JIMA, two of them were shot down by "friendly" anti-aircraft fire from our own ships.

154. As a result of these four suicide crashes, two observed bomb hits, and a third bomb or torpedo hit from an unknown source, SARATOGA lost 49 aircraft and received serious damage. Casualties were 93 dead, 61 missing, and 196 wounded. She had to withdraw, and ultimately returned to the West Coast.

155. At about 1719 on the same evening, KEOKUK (AKN) was steaming in a formation with LSTs and net tenders some 50 miles southeast of IWO JIMA. At this time, a formation of four Jills approaching fast and low on the water was seen. One of these was hit by AA fire, but crashed on KEOKUK and did extensive damage. A second plane successfully attacked LST 477, damaging her. A third plane was shot down by LST 477, and the last one withdrew when subjected to heavy anti-aircraft fire. Casualties on KEOKUK were 14 dead and 28 wounded, and on LST 477

were 9 dead and 5 wounded.

156. During the period when the second series of attacks were being made on SARATOGA, the CVEs nearby were also under attack. Four planes made torpedo runs on LUNGA POINT (CVE). Two were knocked down by AA fire, another did slight damage when its wing hit this carrier as it dove in, and the fourth plane dropped a torpedo and escaped. All torpedoes missed. Two other planes, however, scored suicide hits on BISMARCK SEA (CVE). Serious fires and explosions occurred, and as a result, the ship finally turned over and sank about 2½ hours later. Of a complement of approximately 950, 319 have been declared dead, 99 were wounded and 525 survived. The details of this sinking appear at the end of this ANNEX.

157. There were several other attacks by Japanese planes on ships in the transport area on the evening of 21 February, and three of the attacking planes were reported to have been shot down. No further damage occurred to our ships.

158. Following 21 February, the Japanese air effort ceased to be a menace, though it was necessary to continue to fly dawn, dusk, day and night combat air patrols; and bogeys were reported on numerous occasions. In most cases these were subsequently identified as friendly aircraft.

Summary of Flight Operations and Losses.

159. The brunt of the direct air support during the period from 16 February to 11 March was furnished by ENTERPRISE and the CVEs of Task Group 52.2. With an average daily availability of 351 planes (exclusive of SARATOGA and BISMARCK SEA), the following large number of sorties were flown by Task Group 52.2, and the following losses (also excluding SARATOGA and BISMARCK SEA) were sustained:

	Sorties				Losses		
	Strike and Sweep	C.A.P. A.S.P.	Other	Total	Airborne	Not in Flight	Total
	5128	3328	203	8659	49	5	54

160. Comparable figures for the fast carriers from 19-22 February were:

	1720	1187	45	2952	24	1	25
Totals	6848	4515	248	11,611	73	6	79

161. The number of enemy planes destroyed by our aircraft, both in the air and on the ground in the BONINS-IWO JIMA area, was small due to the paucity of enemy aircraft located there. These are reported to have been 8 enemy planes destroyed airborne by our aircraft, 16 shot down by AA fire, 11 destroyed on the ground, and 5 by suicide crashes; or 40 planes in all.

162. The substantial increase in the proportion of rockets used, as compared to other ordnance, was notable. Over 14,000 rockets were expended on targets at IWO JIMA and CHICHI JIMA. Due to the flat trajectory of the new HVAR rocket employed by fast carrier planes, it was reported particularly accurate and effective.

163. The operations by escort carriers, and by the CV(N) ENTERPRISE, were characterized more by the arduous nature of their duties than by any other feature. Day after day, the pilots from these ships flew missions which, while "routine", were (until AA fire was neutralized) dangerous. Availability of aircraft on the CVEs was kept at 93%, and support was furnished even during fueling periods. ENTERPRISE, for example, maintained aircraft continuously airborne for 174 hours, a length of time which had never been required of a carrier in the past. The CVEs, after furnishing nearly constant support in the PHILIPPINES, continued it for 21 days at IWO JIMA, and with little respite proceeded on to the OKINAWA Area. It was a hard grind for the ships' personnel and the pilots involved. The principal limiting factor in CVE operations was bombs. When these ships left for replenishment, they were very low in types of bombs suitable for continuance of direct support missions.

OPERATIONS OF FAST CARRIER FORCE.
(See Plate XIII.)

Mission.

164. The proximity of enemy air bases in the EMPIRE and in the NANSEI SHOTO north of IWO JIMA, made it desirable that heavy attacks be launched against these bases as a protection to our amphibious forces at the objective. Also, since strong enemy air opposition to our future landings at OKINAWA was to be anticipated, it was necessary to destroy as much as possible of the Japanese air strength, and facilities for building aircraft, before that operation was undertaken.

165. In order to support the occupation of IWO JIMA, the Fast Carrier Force under Vice Admiral M. A. Mitscher was assigned the following tasks:

(a) Destroy enemy aircraft and air facilities in the TOKYO Area.
(b) Furnish such direct support of the IWO JIMA Landing operations on D and D plus 1 Days as requested by Commander Joint Expeditionary Force.
(c) Prevent interference by enemy air and surface action with the capture and occupation of IWO JIMA.
(d) Conduct searches and reconnaissance as required by Commander Central Pacific Task Forces.
(e) After D plus One Day, operate in strategic support of IWO JIMA operations, conducting strikes on the EMPIRE and NANSEI SHOTO.

166. In carrying out these tasks the operations of the Fast Carrier Force during February and early March can be divided into four phases.

(a) Air operations against the TOKYO area on 16-17 February.
(b) Direct support at IWO JIMA on 19, 20, 21, and 22 February, with supplementary support at CHICHI and HAHA JIMA.
(3) Renewed air operations in the TOKYO area on 25 February.
(4) Air and photographic missions in the NANSEI SHOTO region on 1 March.

167. This section of ANNEX A will not include a discussion of air support in the objective area by fast carrier forces, that account appearing with the description of air support in general at IWO JIMA.

Enemy Situation.

168. Naval Strength - The principal remaining naval strength of the Japanese was in the EMPIRE, but its small size and partially damaged condition made attacks on our forces improbable, except attacks by enemy submarines.

169. Air Strength - Enemy air strength in the EMPIRE-NANPO SHOTO-NANSEI SHOTO area was considered to be the greatest ever located within a prospective target area of the Fast Carrier Force. The following estimate was made of enemy air combat strength in this region:

Current Combat Air Strength	VF	VB	VBL	VBM	VP	VPF/VO	TOTAL
HOKKAIDO, KURILES, OMINATO............	30	15	...	30	2	90	167
HONSHU, KYUSHU, and N. NANSEI SHOTO...	1150	220	...	220	50	150	1790
FORMOSA and Southern NANSEI SHOTO, including OKINAWA.........	160	20	10	20	12	110	332
IWO JIMA - CHICHI JIMA................	10	5	...	5	1	5	26
Grand Total	1350	260	10	275	65	355	2315

170. The fighter, dive bomber, and medium bomber strength in the immediate EMPIRE Area was later estimated to be as follows:

	VF	VB	VMB	Total
TOKYO Area....................	550	100	95	745
KURE-NAGOYA Area..............	360	200	50	610
KYUSHU Area...................	350	260	325	935
Total	1260	560	470	2290

With our forces directly attacking the Japanese capital and homeland, intense opposition from enemy aircraft was to be expected.

Composition of Task Force 58.

171. Task Force 58, as constituted for the operations to cover the IWO JIMA landings, was larger than any carrier force ever employed previously. It included 9 CVs, 2 CV(N), and 5 CVL, having aboard approximately 1170 aircraft. It was divided into five task groups, one of which was a night group. This was the first occasion upon which two CV(N) had been used for night operations in a separate task group. Some of the carriers (BENNINGTON and RANDOLPH) were reporting to the fleet for their first combat operation, while SARATOGA had not operated in combat for a long time. Embarked in the carriers were eight air groups which had not theretofore operated as units in combat. The Fast Carrier Force at the outset of the operations consisted of 111 ships. It is of interest to note that of the ships participating in this first fast carrier attack on TOKYO only four had been with the fleet on 7 December 1941. The force at the outset of the operations was organized as shown in Plate X.

Advance Planning.

172. Vice Admiral Mitscher relieved Vice Admiral McCain on 26 January, and on that day the Fast Carrier Force ceased to be Task Force 38 (SECOND Carrier Task Force, Pacific), and again became Task Force 58 (FIRST Carrier Task Force, Pacific). Prior to taking command, thorough and detailed plans for the ensuing operation had been prepared by Vice Admiral Mitscher and his staff, largely at PEARL Harbor. These plans, together with those of task group commanders, were distributed to ships involved earlier than usual, giving all units full opportunity to study them. The proposed attack on the Japanese capital brought with it certain new problems, and a number of new tactics were developed to meet these.

173. The TOKYO Area, which had been selected as the first region for attack, had been hit on several occasions by B-29s. As a result, considerable photographic

coverage existed of the airfields and factory installations in this region. Information available during the planning stage indicated the existence of from 15 to 20 important airfields and air depots, and probably three times that many lesser fields. Nearly all of these fields were within 50 miles of the center of TOKYO.

174. The TOKYO Bay Area was divided into four regions, and each region was assigned to one of the day task groups for coverage (see Plate XIII). The northwestern area, containing the important combat fields of TOKOROZAWA, CHOFU, and NARIMASU, and the large air depots of TACHIKAWA and KOIZUMI, was allotted to Task Group 58.3. The area northeast of TOKYO was allotted to Task Group 58.4. This region contained three principal combat air fields HYAKURIGAHARA, KONOIKE, and TSUKUBA, as well as two depots. The CHIBA Peninsula region, except for the important TATEYAMA Airfield, was left to Task Group 58.2. There were five combat airfields in this area, probably the most important of which was KISARAZU, halfway up TOKYO Bay. The last and largest area, to the southwest of TOKYO and extending beyond HAMAMATSU on the west, included, beside HAMAMATSU, the important enemy fields of YOKOSUKA, TATEYAMA, and SHINOMIZO, and the heavily defended ATSUGI fighter base. This region was to be covered by Task Group 58.1.

175. As pointed out above, it was to be expected that there would be over 745 enemy aircraft located at these various fields. In addition, the fields and the principal installations were believed to be heavily defended by anti-aircraft batteries. It was assumed that tactical surprise would not be achieved, so the air plan for the first day's strike provided for successive fighter sweeps against airfields in the assigned areas. Bomber attacks were only contemplated if conditions warranted.

176. In order to reduce losses to anti-aircraft fire as much as possible, as well as to protect the aviators in the anticipated hard fighter battles, special instructions were prepared. Flak-analysis officers were assigned to a number of carriers to brief pilots on the best methods of approach to targets and retirement from them, and as far as possible how to avoid losses. As a result of conferences between air group commanders, and because of the number of comparatively "green" air groups, special instructions on air combat methods were disseminated to aviators.

177. The projected strikes on TOKYO were the first instance in which carrier aircraft had been presented targets of the strategic-bombing type to hit. Destruction of these targets was of course secondary to the primary mission of destroying enemy aircraft in the air and on the ground. Nevertheless, intelligence material on the subject, prepared in advance, was given thorough consideration, and it was planned to hit aircraft engine plants if the opportunity was afforded. The plants which it was planned to attack were allocated among the four Day Task Groups as follows:

Task Groups 58.1 and 58.3	TAMA-MUSASHINO
Task Group 58.2	MITAKA
Task Group 58.4	TACHIKAWA

These plants, like the airfields, were all located near TOKYO. They produced a sizable percentage of the total Japanese combat aircraft engine output. It was hoped that strikes on them would result in approximately 50% destruction of the latter two plants, and 30% destruction of the TAMA-MUSASHINO Plant.

178. Both to afford protection to the force from attacking enemy aircraft, and for greater destruction of Japanese aircraft, every effort was made to insure that the force would arrive off TOKYO undetected. It was known that the enemy maintained a line of picket boats off the coast at about 30° north latitude to detect the approach of hostile forces. Enemy aircraft searches were believed to be fairly extensive to the east and south of TOKYO, but the exact area covered by these was not known. To avoid detection of the approach of our force, special efforts toward detection and destruction of enemy picket boats were made. B-29s from the MARIANAS, with naval observers embarked, were to search the anticipated position of these boats thoroughly. Submarines and an advance destroyer scouting line were to be employed to destroy them. This scouting line (Task Group 58.8) was to consist of 15 destroyers, a linking vessel, and two destroyers in each of seven stations separated by 10 mile intervals. These DDs were to operate 35-40 miles in advance of the leading task group, on a line normal to and centered on the force line of advance. In addition to destruction of picket boats and snoopers, this group was designed to give early warning to the main force of the approach of enemy surface or air forces which it could not itself destroy. On arrival in the TOKYO area, some of these destroyers remained as a radar picket line, and were furnished with and controlled a 16-plane combat air patrol.

179. Despite the fact that the target was heavily defended by enemy aircraft, the percentage of our own fighter aircraft detailed for defensive patrols on strike days was somewhat less than during preceding months. Each task group was to retain not less than 56 fighters for defense of the group as follows:

8 VF in Condition 10 (pilots in plane; engines warmed and ready).
24 VF in Condition 11 (available to launch in 10 minutes).
4 VF over radar picket line.
8 VF at 20,000 feet.
4 VF at 12,000 feet.
4 VF at 5,000 feet.
4 VF at 3,000 feet or below the overcast.

180. Allocation of this number of fighters from each day task group, irrespective of the number of carriers in the group, left the number of fighters remaining for other duties different in each group. It was estimated that the number of VF available for offensive missions would be as follows:

	Task Groups 58.2 and 58.3 (each) 2 CV, 1 CVL	Task Group 58.4 2 CV, 2 CVL	Task Group 58.1 3 CV, 1 CVL
VF Cover for bomber strikes..............	40	48	56
VF Sweep or Strike......................	36	48	72
Spares for Searches, VF(P), Cover, etc...	8	10	16
Totals.	84	106	144

181. The pronounced offensive advantage of a task group having three CV is evident from the foregoing figures.

182. The original plan called for strikes on TOKYO for two or three days, coincident with the commencement of the bombardment and beach preparation at

IWO JIMA. After the TOKYO strike, the force was to return to furnish direct support at the objective, and was thereafter again to proceed to JAPAN, striking NAGOYA or KYUSHU; then return to ULITHI via OKINAWA, where photographic missions were to be flown. As the operation developed, it became desirable to abandon the NAGOYA and KYUSHU strikes, and substitute a second attack on TOKYO.

Sortie and Approach.

183. The force sortied from ULITHI on 10 February, and set course to the eastward of the MARIANAS, VOLCANO, BONIN, and ISU Islands en route to the TOKYO area. During the first days of the passage, extensive training exercises were carried out for air groups, the advance destroyer scouting line, and other ships of the force. The use of TDD units for gunnery training proved helpful. Another innovation practised during the month was AA gunnery training during fueling exercises. A rehearsal of the pre-landing air support with amphibious forces at TINIAN was accomplished, and this joint exercise proved beneficial when the actual landings at IWO occurred. Usual patrols were flown, and ships fueled en route. Despite the strenuous nature of these training missions, aircraft availability on the morning of the 16th, when the first sweep took off for TOKYO, was over 97% of complement.

184. On the 11th, 12th, and 14th of February, 9, 10, and 17 B-29s respectively were sent from MARIANAS bases on extended search missions for picket boats. Two of the missions covered an area 60 miles wide from 135° E. to 148° E., while the third mission covered the area on the approach route of the force from 28° N. to 35° N., between 140° E., and 148° E. A number of sightings were made. The searches, conducted both by the B-29s and by search planes of Task Group 50.5, assisted in preventing detection of the force. These searches were supplemented by carrier patrols flown by TINIAN-based PB4Ys, and by the usual patrols by carrier aircraft.

185. On 12 February, Admiral Spruance in INDIANAPOLIS, after conferring with Amphibious Commanders at SAIPAN, departed that area, and on the 13th joined the Fast Carrier Force. The route of the carriers passed well to the eastward of the chain of islands leading north to TOKYO, and approached the objective from the southeast. (See Plate XIII.) Fueling was conducted en route.

186. As Task Force 58 approached the enemy homeland on 15 February, the advance destroyer screen, consisting of 15 destroyers under Captain H. B. Jarrett, took up position approximately 35 miles in advance of the leading task groups. This search screen made no contact with enemy picket boats, but at 0850 a force patrol plane sighted a small craft 25 miles from the force. This 60-foot vessel was sunk by HAILEY (DD), after being thoroughly strafed by aircraft. Aside from this small ship, the only other enemy contacts which occurred on the approach was a Betty, which was shot down by a YORKTOWN plane at a considerable distance from the force, and a picket boat destroyed by HAYNESWORTH (DD) at 0615 on the 16th of February. It seems apparent that the force arrived at its launching point on the morning of 16 February without having been detected. Surprise was achieved, and the operation was off to a good start.

Operations off TOKYO on 16-17 February (See Plate XIII).

187. Weather - Bad weather, which had dogged the track of the fast carrier force in January, again aided the Japanese during the two days of 16 and 17

February, when the force operated off TOKYO. As it reached the launching point (120 miles, bearing 135° from TOKYO), overcast skys and lowering ceilings existed in the operating area, making rendezvous difficult. Flying conditions were undesirable to bad. These conditions continued throughout the day. In the region assigned for attacks, there were numerous occasions when the more inland fields were entirely closed in and could not be struck, forcing heavier assaults on other less important targets which were still open. Some improvement in these conditions over TOKYO occurred in the afternoon of the 16th, but the weather again deteriorated on the 17th.

188. Operations 16 February - The first sweep of the day on 16 February took off from all carriers between 0645 and 0700 (sunrise 0719). As it approached the target, a babble of Japanese communications was heard from HACHIJO JIMA and elsewhere, indicating that the presence of the force was finally detected. The planes from Task Group 58.3, which had been assigned the inland area NW of TOKYO, were unable to reach their targets because of a solid overcast, and had to attack elsewhere. The CHIBA Peninsula and the coastal region assigned to Task Groups 58.1, 58.2, and 58.4, however, were found to be more open. The 40 aircraft from the first sweep of Task Group 58.2 ran into approximately 100 enemy fighters along the northeast coast of CHIBA Peninsula, and shot down 40 of them. This, with successive sweeps, cleared the peninsula of aircraft sufficiently to permit heavy strafing attacks on KATORI, MOBARA, and MIYAKAWA Airfields.

189. Throughout the 16th, over 700 enemy planes were encountered in the TOKYO area by our strikes and sweeps. This extent of interception exceeded anything hitherto experienced by the Fast Carrier Force. Of these interceptors, it is estimated that 281 were shot down, while our own losses to enemy aircraft totalled only 24, less than 10% of enemy losses. Reports indicate that in these large scale air battles our losses were negligible where the team work so long practiced by our fliers was maintained. Many of the losses which did occur came when an individual pilot became over-zealous for a kill, and broke away from his section or division to make an individual attack. One reported feature of the attacks was gun failures due to the unaccustomed low temperature. Despite this, the results obtained speak for themselves.

190. Due to the extent of enemy interception, not as much time was available to make strafing attacks on grounded aircraft as had been the case in attacks in the PHILIPPINES. Targets of this type were very plentiful on the TOKYO fields, there being 1500 aircraft (or dummies) visible on 26 of the 90 known airfields photographed during the two days. Estimates of the total number of planes destroyed on the ground varied considerably due to photographic difficulties encountered with the bad weather; it is estimated, however, that 209 grounded aircraft were destroyed on the 16th. This total, combined with the 281 destroyed airborne, made the attacks on the 16th among the most profitable of the war to date. It is inevitable that both figures include some duplication, being based on ACA-1 reports, although they do not include planes listed as "probably destroyed" or "damaged".

191. During the course of the day, the task groups each flew off five fighter sweeps and one or more bomber strikes. The total sorties aggregated 1657, of which 1111 were offensive missions. The final sweep of the day was made by VF(N) of the night carrier task group, which landed after dusk. These planes covered the principal fields of the TOKYO area, and as far west as

HAMAMATSU, in order to dissuade the enemy from launching his customary dusk attacks.

192. During the night, the night groups carried out search missions to the westward, while the task force moved in a generally southwesterly direction to its 17 January dawn launching position. At 2200, the TBS on INGRAHAM (DD) went out, and she missed a signal to commence zigzagging. In the darkness, BARTON (DD) collided with her, damaging BARTON's bow and dishing in INGRAHAM's side.

193. Operations 17 February - Attacks on the 17th were again limited by adverse weather conditions, and the strikes originally scheduled had to be curtailed in the afternoon. The schedule which was followed again commenced with fighter sweeps, and later strikes of bombers were made against aircraft production facilities. On the 17th, a substantial reduction occurred in the amount of enemy air opposition, although it was still formidable. It is estimated that 238 enemy planes were engaged on this day, of which 83 were destroyed. Our losses to enemy planes again were comparatively light. In successive fighter and bomber attacks on airfields, additional planes were destroyed on the ground, and substantial damage was done to airfield installations.

194. Attacks on Aircraft Plants - The secondary mission of the fast carrier force was destruction of certain specified aircraft engine factories. As in the case of airfields, these inland plants were hard to locate under the prevailing weather conditions, and attacks on them were not as effective as they otherwise might have been.

195. The following table, taken from the report of ComAirPac covering the subject operation, summarizes attacks on strategic targets during these two days, in terms of bomb tonnage:

Target	Tonnage Estimated required for 50% structural Damage	Tonnage allocated under Original Plan	Tonnage Sent Out	Tonnage Dropped on Target
Engine Plants:				
TAMA-MUSASHINO	240	127	40 *	34
TACHIKAWA...........	75	70	65 *	58 #
MITAKA..............	55	61	..	..
Airframe Plants:				
OTA.................	190	...	90 *	35
KOIZUMI.............	145	...	..	..
Totals	370 @	258	195 *	127

* Partly estimated from number of abortive sorties flown.
# Less bombs dropped on airframe plant, probably 10-20 tons.
@ Engine plants only.

196. The assessed results of these strikes were reported as follows:

(a) TAMA-MUSASHINO - Net loss of six weeks production.
(b) KOIZUMI - Net loss of six weeks production.
(c) OTA - Out of production for a number of months as a result largely of prior B-29 strikes.
(d) TACHIKAWA Engine Plant - Net loss of six weeks production.
(e) TACHIKAWA Airframe Plant - Possibly two months delay in completing construction of part of plant being built.

197. One of the strikes launched against strategic targets occurred on the morning of 17 February, when more than 100 planes were sent out from Task Group 58.3. This strike, which took off at 0830, took a roundabout route to the target due to bad weather, and attacked the TAMA-MUSASHINO Plant. While en route, an estimated 24 enemy interceptors were encountered, and more appeared near the target. The bomber escorts succeeded in driving off all attacks by these planes, one of the interceptors being chased at low level into the TOKYO suburbs, where he was shot down in flames. Despite intense flak, the bombers went on to make a well coordinated attack, and all pilots and aircrewmen ultimately returned safely without loss.

198. Attacks on Shipping - In addition to the attacks on aircraft production plants, there were a number of air attacks on shipping. The most important enemy ship hit was a CVE in TOKYO Bay. Several 500-pound bomb and rocket hits were scored on this ship. It rolled over on its side, and is considered probably sunk. A number of smaller ships were severely damaged or sunk, as well. During the period from the approach to retirement, destroyers of the force engaged and sank several picket boats and small craft, three of these being credited to HAYNESWORTH (DD) on the afternoon of 16 February. These gunfire attacks usually followed severe strafing attacks by aircraft.

199. Enemy Counter-Attacks - The outstanding feature of the two-day strike on the enemy's capital was the almost complete lack of counter-attacks on our forces. With Task Force 58 steaming within easy attack range of large numbers of enemy airfields well supplied with aircraft capable of attack, with the recent experience of enemy suicide missions indicating the fanaticism of enemy offensive efforts, and with this raid a direct threat to the "sacred" homeland itself, it was to be expected that the reaction to our strike would be quick and violent. The exact opposite was the case. A few scattered bogeys approached the task force at low altitudes both on the 16th and 17th, usually following our strike planes back to base. Nearly all of these were picked up by destroyers of the radar picket line, and were shot down by the combat air patrol furnished that task group. These ships during both days maneuvered in pairs only 40-60 miles off the Japanese coastline, but were attacked on only one or two occasions, and then unsuccessfully. On the 16th, aircraft controlled by these destroyers shot down eight Japanese planes, and destroyed another on the 17th. A few more enemy aircraft approached the other ships of the force. They were generally discovered by picket destroyers, and none attacked successfully. A few were shot down. The initial surprise which Task Force 58 had obtained, combined with weather conditions in the operating area, probably contributed to the lack of successful enemy counter-effort; but it seems more likely that the Japanese failure to send determined large-scale air attacks against the force was a policy deliberately adopted by them.

Another noteworthy factor in the enemy's defense was the relatively ineffective anti-aircraft fire which met our strikes. During the two-day strike under discussion, and during the additional attack of 25 February, over 2000 Navy and Marine Corps planes were over TOKYO Area targets, and yet only 24 were lost as a result of anti-aircraft fire. While the volume of this fire was considerable around important aircraft plants (though usually not at airfields), it was generally inaccurate. Use of window, radar jamming devices, careful consideration of routes of approach and retirement, and evasive tactics, all are reported to have contributed to the light losses sustained.

201. Rescue Operations - - Our pilot and aircrew losses were reduced by the usual effective rescue operations of destroyers and submarines, despite restricted waters near the Japanese shoreline. On one occasion, a RANDOLPH pilot had been compelled to jump from his plane, and when he hit the water, his parachute failed to collapse, dragging him through the water down wind at from 5 to 15 knots. TAUSSIG (DD) was able to overtake and pass the pilot, and then turn across his course and stop. The parachute blew into the main deck amidships where the rescue party dragged the unconscious pilot aboard. After artificial respiration he was successfully revived.

202. Operations of Night Carrier Group (Task Group 58.5) - - The February operations were the first occasion that a separate task group containing two CV(N) had operated with the fast carrier force. The operations of such a group were therefore in a sense experimental.

203. With the carriers ENTERPRISE and SARATOGA, the screen consisted of the large cruiser ALASKA, the heavy cruiser BALTIMORE, the AA cruiser FLINT, and 12 destroyers. This screen was not comparable in strength to that furnished the day carrier groups.

204. The original operation plan for use of the night carrier task group provided that while off TOKYO the night group would operate farthest from shore during daylight, receiving protection from the day groups; and that this position would be rotated at night, so that the night group would be closest to the objective while it was carrying on its night operations. Independent operations were contemplated. Daylight combat air patrols over the night group were to be provided by the day groups as practicable, so that the night group would be free to carry out its primary function - - night operations. The schedule of these as planned called for "zipper" missions of VF(N) at dusk, to sweep the principal coastal TOKYO airfields after departure of the last planes from the day carriers. This was to be followed by "heckler-intruder" missions to harass these fields throughout the night and at dawn. Night searches and a possible strike against one of the electronic tube factories adjacent to TOKYO Bay were also considered. Defensively, the group was to provide a dusk combat air patrol for the force of 16 VF(N).

205. Since the aircraft complement of the night carriers is only 60% of that of the day carriers, and night operations are necessarily slower, the original plan for utilization of the night group was the maximum which might have been expected of it.

206. As it turned out, it was not possible for day groups regularly to provide day combat air patrols over the night groups, and 62% of the total air effort of Task Group 58.5 had to be expended defensively in providing these patrols.

207. In the operations against TOKYO on 16-17 February, the night group launched only 32 offensive sorties. Among the reasons for this were:

(a) Bad weather conditions for night flying.

(b) The cancellation of the plan to have Task Group 58.5 rotate the force and operate toward shore from the day groups made it impossible for that group to reach a satisfactory launching point for continuous night operations, and still operate in the close proximity to day groups during daylight, which (considering the weak screen and lack of CAP afforded the night group) was desirable.

(c) Necessary diversion of much of the limited potentially available air effort to daylight combat air patrols.

(d) Difficulties of planes from the SARATOGA air groups in locating their ship and coming aboard after completion of their dusk "zipper" missions to HAMAMATSU.

208. The offensive missions which were launched consisted of dusk "zipper" flights of 12 planes from ENTERPRISE covering the principal TOKYO Bay airfields, and six from SARATOGA sent to HAMAMATSU. Night searches to the westward totalling eight planes, plus radar counter-measure (RCM) flights were also launched. The ENTERPRISE "zipper" flight destroyed four planes on the ground, damaged two ships and three locomotives, and strafed shore installations. The night searches flown in very thick weather were negative. RCM flights obtained valuable information of the TOKYO Area, radar frequencies, and locations.

209. While night offensive operations were limited in scope, the failure of the Japanese to attack at night made it impossible for the night fighters to prove their worth as defensive weapons. Although the night operations off TOKYO, as they actually developed, resulted in only limited damage to the enemy, the conditions existing at the time were such as to prevent a thorough test of the capabilities of a night carrier task group.

210. After departure from TOKYO, it became necessary to furnish night combat air patrols at IWO JIMA. SARATOGA was first detached with a light screen for this purpose, and when she was disabled by attacks of suicide planes on 21 February, her place was taken by ENTERPRISE. A discussion of these operations appears in the Section of this ANNEX dealing with air support at the objective.

211. Air Sea Rescue - - One particularly courageous rescue occurred on the afternoon of 17 February when, as the task force was about to leave the area, a COWPENS pilot was compelled to make a water landing four miles northeast of the Island of O SHIMA in the mouth of SAGAMI WAN (outer TOKYO Bay). Members of his flight stayed with him for over 1½ hours, directing the submarine POMFRET to him. One by one, fuel exhaustion compelled the orbiting planes to return to the force. He was once lost sight of, but with the aid of a hand mirror, the downed pilot again was able to attract attention to his position. Passing within three miles of O SHIMA and near a number of small craft, POMFRET (SS) completed the rescue approximately 17,500 yards off JOGA SHIMA, and retired without air cover, unmolested. The Navy had penetrated outer TOKYO Bay to effect a rescue of one individual, an incident which, while foolhardy by Japanese standards, by ours is considered worth-

while, in that such acts add immeasurably to the morale of all naval flyers.

212. Retirement - - About noon on the 17th, when the weather was getting worse, Commander FIFTH Fleet proposed to the OTC (Commander Task Force 58) that the task force retire toward IWO JIMA. This proposal was carried out, and no sweeps or strikes were launched in the afternoon. When the aircraft already in the air were recovered, the force commenced its retirement.

213. Due to the collision of BARTON and INGRAHAM on the 16th, these destroyers with MOALE retired earlier than the rest of the force on the 17th. At about 2115 on the 17th, contact was made with two enemy boats, one a 225-foot merchant type and the other a small escort vessel. Both targets were sunk with no damage to our destroyers. A third merchantman was located and sunk by these same destroyers at about 0340 the next morning. During retirement before sunrise on the 18th, WALDRON and CALLAGHAN (DDs) each sank a picket boat. WALDRON'S was finally sunk by ramming and she received some damage in the process.

214. The Fast Carrier Task Force had for the first time placed itself in position to receive the full brunt of attack by the Japanese home-based air and naval forces, had diverted the enemy's attention from the IWO JIMA Operations, had destroyed and damaged large numbers of his aircraft and installations, and had then withdrawn virtually unscathed. Carrier based air power had passed another landmark, and from this time onward, no part of the Japanese homeland could be considered too remote or too well defended to be free from the assault by this means. The progress of the force during the year is emphasized when it is considered that the TOKYO raids came only one year (to the day) after the first carrier attack on TRUK, an event which at the time was considered momentous.

215. The operations of the fast carrier force in direct support of the amphibious assault on IWO JIMA appears elsewhere in this ANNEX, with the account of other direct air support given there.

Attacks on TOKYO Area on 25 February.

216. The original plan for utilization of the fast carriers had called for the second strike on the EMPIRE to be successively on NAGOYA, the Inland Sea Area, KYUSHU, and OKINAWA. It was considered, however, that further destruction of engine plants in the TOKYO region would contribute more toward reduction of Japanese air strength, and the second attacks were accordingly shifted to TOKYO.

217. On completion of the direct support operations at IWO JIMA, the four day task groups of Task Force 58 replenished aircraft and refueled at sea from Task Group 50.8 on 23 February, being joined at the fuelling area by ComFIFTH Fleet and various battleships, cruisers, and destroyers from IWO JIMA, and thereafter again proceeded toward TOKYO. ENTERPRISE (CV(N)), with her screen, remained behind under the command of Commander Task Force 51 to continue giving night support in the objective area. The approach course passed to the westward of the VOLCANOES and BONINS. As the force moved northward, moderate to rough seas were encountered which made it difficult to top off destroyers, and slowed the speed of advance from 21 to 16 knots. SAN FRANCISCO and several destroyers, particularly COLAHAN, sustained minor damage in attempting high speeds in the rough seas. As a result of the sea conditions, the early launch of aircraft, which had been scheduled, was delayed until 0730, and the planes

then had to go 175 miles to the nearest land.

218. Several bogeys appeared near the task force early in the morning of 25 February, and it appeared probable that the force was detected about five hours before the first strikes could be launched. The enemy took advantage of this time to prepare to meet our air attacks. The nature of the preparation seems to have been to fly as many planes as possible (other than fighters) out of the TOKYO area. Fields at which many planes had been encountered during the former strikes were practically deserted. Enemy opposition was not aggressive, and no attacks were made on ships of the force.

219. Approximately 500 sorties were flown during the day, and 62 tons of bombs were dropped. Fifty enemy planes were shot down, and a larger number destroyed on the ground. In addition to attacks on airfields, KOIZUMI Aircraft Assembly Plant was successfully attacked when the primary target, MUSASHINO Engine Plant, could not be reached. Twenty-five to 30 hits with 500-pound bombs, and six hits with 1000-pound bombs, were believed to have been made on this plant.

220. As on the 16th and 17th, weather, which got progressively worse as the day wore on, again hampered air operations, requiring the cancellation of most strikes and sweeps after 1215.

Operations 26 February - 28 February.

221. In the light of existing poor weather conditions, and with the prospect that the weather in the TOKYO Area would not improve, withdrawal was ordered, and course was set to the south and westward, with the intention that attacks would be launched on the NAGOYA area the next day. Course was laid between TORI SHIMA and SUMISHU SHIMA.

222. As the force proceeded, heavy weather with rough seas and high winds developed during the night, making it evident that it would not be possible to reach the launching position the next day; and early on the morning of the 26th a decision was made to turn south to a fueling area on the 27th, and abandon the NAGOYA attack. During this night the heavy weather caused structural damage to STEPHEN POTTER, JOHN W. WEEKS, and BENHAM (DDs).

223. In the meantime, however, the hours from 1600 on the 25th to the early morning of the 26th were not without incident. The area being traversed by the force was one in which the Japanese maintained picket boats, and contact was made with one of these. At the time, the order of task groups from west to east was: 58.1, 58.3, 58.2, and 58.4. At 0030, while in the van of the circular screen of Task Group 58.3, PORTERFIELD (DD) made radar contact at 8000 yards with a surface vessel directly ahead. Speed at the time was 22 knots, and the rate of closing approximately 30 knots. Wind was 33 knots from dead ahead and seas were rough. Since it was considered that the contact might be friendly, it was closed to 3000 yards before it could be identified as a 100-foot enemy picket boat, and fire opened with automatic weapons. Only 16 rounds of 5" could be fired due to other ships fouling the range. The enemy opened fire on PORTERFIELD, using two machine guns and what is estimated as a 2" gun. Hits on PORTERFIELD put out her TBS and remote PPI, and caused other damage which affected her fighting efficiency, killed one officer, and wounded 13 men. During this period, PORTERFIELD and the enemy boat passed back through the screen of the Task Group. PASADENA (CL)

nearly rammed the enemy ship, and succeeded in making a number of hits on it with both 5" and 40-mm batteries. The enemy ship returned the fire, scoring 13 hits on PASADENA, resulting in minor damage, and wounding of two men. By 0048, the picket boat was badly damaged, and as Task Group 58.2 was rapidly overhauling the scene of action, PORTERFIELD (who was then unable to communicate to identify herself) was ordered to withdraw. STOCKHAM (DD) of Task Group 58.2 ultimately sank the troublesome picket boat. The difficulty which one small picket boat could cause, once it penetrated the screen, was clearly evidenced by this episode. That none of our ships was hit by fire from another during these few minutes, indicates a commendable restraint and perfected tracking procedure, as contrasted with some of the earlier night surface actions of the war.

224. On 27 February, rendezvous was made by all four task groups with service groups of Task Group 50.8, and fueling and replenishment of aircraft proceeded during the day. During the fueling exercise SAN JACINTO (CVL) and MERRIMACK (AO) collided, causing minor damage to both ships.

225. A new development in the replenishment of planes and pilots occurred during the February operations. When the force departed ULITHI early in the month, air groups sortied with 150% of pilot allowance. In order to prevent replacement fighter pilots from coming aboard individually, and thereby sacrificing the team training which had preceded their arrival in the forward area, carriers refrained from obtaining replacement fighter pilots until they were ready to receive a full team of four at once. This assured the success of team training and was considered by Commander Task Force 58 to be an important development in the operations of the Fast Carrier Force. Indicative of the extent of aircraft and pilot replacements required to maintain the fast carrier force in operations, are the figures for the number of each supplied from 10 February to 4 March by the service units. The four day carrier groups alone received 220 replacement aircraft of nine different kinds, as well as 50 replacement pilots.

226. Another development in servicing ships of the fast carrier force was brought to fruition in February, when large quantities of bombs were put aboard carriers while underway and during fueling periods. Some of the carriers took aboard bombs of various types at a rate of over one half ton per minute.

227. On conclusion of fueling on 27 February, Task Group 58.4, plus SAN FRANCISCO, SAN JUAN, BENHAM, HALSEY POWELL, COLAHAN, STEPHEN POTTER, and PORTERFIELD, less SAN DIEGO and DesDiv 99, proceeded toward ULITHI, while Task Groups 58.1, 58.2, and 58.3, augmented by ships detached from Task Group 58.4, set course for the OKINAWA area. Commander FIFTH Fleet also departed for the IWO JIMA area on the 27th.

Operations Against NANSEI SHOTO 1 March.

228. The primary mission of the operations in the OKINAWA area was to obtain photographic coverage of islands in the NANSEI SHOTO. As usual, the areas to be covered were divided between the three task groups involved.

229. The launching point was distant 60-70 miles ESE of OKINAWA, and about 155 miles from AMAMI O SHIMA. The three task groups arrived at their launching points without being detected, and commenced launching aircraft at approximately 0715, 30 minutes before sunrise. As in the previous operation, a destroyer radar picket line was placed in advance of the force.

230. Except for KERAMA RETTO, where cloud cover interfered with photographic coverage, weather over the target area was generally good, and as a result, a high proportion of the desired photographic coverage was obtained. The coverage consisted of both verticals and obliques. In addition to their normal escort of one VF for each VFP, photographic teams were given eight VF who strafed anti-aircraft gun positions for them. As a result of this protection, the normally hazardous missions were performed with the loss of only one photographic pilot during the entire February operations.

231. With the early launch, and again in the afternoon, searches were sent out to the north and southwest, and these were successful in locating a substantial number of shipping targets, many of which were attacked both by search planes and by subsequent strikes. Unfortunately most of this shipping was small in size, though a few DEs or PFs were located. During the course of the day, 1 DE or PF and 13 small freighters, tugs, or luggers were sunk, and approximately 50 other small ships probably sunk or damaged.

232. There was virtually no air opposition, the only enemy planes encountered in the air being four shot down by search planes, three of them near the coast of KYUSHU. None of our ships was attacked. On the ground, a substantial number of damaged and dummy aircraft were observed, but it is estimated that 37 operational grounded enemy planes were destroyed and others damaged. Our own losses totalled 13 aircraft in combat, and eight operationally. Seven pilots and three aircrewmen were lost. Sorties during the day totalled 1228, of which 872 were strike and sweep sorties.

Bombardment of OKINO DAITO SHIMA 2 March.

233. The island of OKINO DAITO SHIMA is located approximately 215 miles southeast of OKINAWA. The island is small (2½ miles in circumference), and its principal installations are on the western side, consisting of the radio and possible radar station, phosphate plant, dock facilities, oil tanks, and living quarters. It was defended by a few dual-purpose guns.

234. As Task Force 58 was operating off OKINAWA, orders were issued to Commander Cruiser Division 14 (Rear Admiral F. E. M. Whiting) to prepare plans to bombard OKINO DAITO SHIMA on that night (March 1-2) with cruisers and destroyers, and to rejoin the force during its retirement toward ULITHI.

235. The ships which participated in this bombardment under Rear Admiral Whiting were: VINCENNES (F), and MIAMI (CLs), SAN DIEGO (CL(AA)), DeHAVEN (ComDesRon 61), MANSFIELD, COLLETT, LYMAN K. SWENSON, SAMUEL N. MOORE, TAUSSIG, BLUE, and BRUSH (DDs).

236. This task group was detached from Task Group 58.1 at 2030 on the evening of 1 March, and proceeded toward the objective, where it arrived shortly after midnight. Firing was conducted in three runs, paralleling the western shore line approximately 4000 to 5000 yards off shore. Bombardment commenced at 0043 on 2 March, and was completed about one hour later. During this time, ships fired 1032 rounds of 6" and 4956 rounds of 5" at the island. Radar ranges and bearings were used for the most part, visual bearings being made difficult because of smoke. Star shell illumination was provided by the destroyers. A number of good fires were started, but the details of the damage could not be

observed. On completion of the bombardment, ships retired, and rejoined Task Group 58.1 the next morning. The firing provided valuable experience, which had in prior months come very seldom to the ships regularly operating with the fast carrier force.

Retirement.

237. During the retirement on 2 March, a successful search for the crew of a B-29 was made, and PRESTON (DD) succeeded in picking up eight survivors.

238. At 2000 on 2 March, Destroyer Division 109 (PORTERFIELD, PRESTON, CALLAGHAN, IRWIN, CASSIN YOUNG) proceeded toward PARCEE VELA Reef to bombard it. Bombardment was carried out from 2137 to 2155, during which time each ship fired 150 rounds, with results generally unobserved. On conclusion of the bombardment, these ships rejoined Task Group 58.3 and the force proceeded to ULITHI.

Summary of February Operations.

239. Task Force 58 during February passed another milestone when its planes made their first attack on enemy air forces in the Japanese homeland. That these strikes contributed toward diverting the enemy's attention from our forces at IWO JIMA is apparent from the very few enemy air attacks made there. In accomplishing this end, the Fast Carrier Task Force carried out its primary mission. Support given in the objective area was generally as required, and photographic coverage obtained at OKINAWA contributed materially toward the planning and execution of that campaign.

240. The material damage done to the Japanese by the Fast Carrier Force during the period 16 February-1 March can be summarized as follows:

Enemy planes destroyed airborne	393
Enemy planes destroyed on the ground	266
Enemy ships sunk (Includes 1 DE or PF, 10 picket boats and 16 small freighters.)	48
Enemy ships probably sunk (Includes 1 CVE.)	49
Enemy ships damaged (Approximately half of them luggers and small craft.)	126

241. Damage to enemy aircraft plants in the TOKYO areas has already been described, and this damage was augmented by the hits scored on installations at air fields, in both the TOKYO and NANSEI SHOTO Area.

Our own losses during these operations were as follows:

Planes lost in combat operations	84
Planes lost operationally	59
Pilots lost or missing	60
Aircrewmen lost or missing	21
Ship personnel killed	97
Ship personnel wounded	216
Ship personnel missing	61

242. SARATOGA received severe damage from four suicide planes off IWO JIMA. DORTCH, WALDRON, and PASADENA suffered minor, and PORTERFIELD major structural damage during night engagements with enemy picket boats, while heavy weather caused varying degrees of damage to SAN FRANCISCO, PRESTON, STEPHEN POTTER, JOHN W. WEEKS, COLAHAN, BENHAM, MOALE, and HALSEY POWELL. In addition, BARTON and INGRAHAM suffered considerable damage, and YARNALL and RINGGOLD serious damage as the result of collisions.

243. Indicative of the effort expended are the following figures:

Sorties over targets totalled..............5514
Bomb tonnage dropped on targets totalled....1118.65 tons
(Excludes 218 Napalm bombs, 12 torpedoes, and 9896 rockets.)

OTHER FORCES AND ITEMS.

Logistic Support Group (TG 50.8).

244. For the first time, a logistic support group under a flag officer was given a trial and work-out during the IWO JIMA Operation. Its presence in or near the combat zone permitted ships of the Fleet -- particularly those of the carrier task forces -- to remain at sea over long periods. To the services rendered during previous operations by the fleet oilers and transport CVEs there was added the replenishment of ammunition by ammunition ships and of other supplies by one general supply ship. Its composition was as shown below, initially; although it changed continually thereafter.

Task Organization -

50.8 Logistic Support Group - Rear Admiral D. B. Beary.

50.8.10 Task Group ABLE.

(a) 50.8.11 DETROIT (FF) - Captain D. Curry Jr.

(b) 50.8.12 Train - Captain F. S. Gibson.
AO's: ATASCOSA, KANKAKEE, CHIPOLA, MARIAS, AUCILIA, CHIKASKIA, PLATTE, CALIENTE, CIMMARRON, MANATEE, TALUGA, CACAPON, MONONGAHELA, PATUXENT, NECHES; - ATF's: SIOUX, UTE, CREE, MOLALA; - CVE: BOUGAINVILLE.

(c) 50.8.14 Screen - Commander H. H. Love.
DDs: DEWEY, AYLWIN; - DEs: RAYMOND, H.F. CLARK, SILVERSTEIN, LEWIS, LYMAN, CROWLEY, BENGUST, WATERMAN, WEAVER, HILBERT, LAMONS, KYNE.

(d) 50.8.15 Carrier Escort - Commander H. D. Riley.
CVE: MAKASSAR STRAIT; - DDs: DALE, FARRAGUT.

50.8.16 Task Group BAKER - Captain H. F. MacComsey.

(e) 50.8.17 Train - Captain V. Bailey.
AOs: MERRIMACK, NEOSHO, CHICOPEE, SUAMICO, SCHUYLKILL, TALLULAH, TOMAHAWK, KENNEBAGO, CAHABA, MILLICOMA, SAUGATUCK, CACHE; CVEs: ADMIRALTY ISLANDS, ATTU, WINDHAM BAY; - AEs: WRANGELL, SHASTA; - AKA: VIRGO.

(f) 50.8.22 Screen - Captain J. R. Pahl.
DDs: STEVENSON, THORN, BUCHANAN, HOBBY, GILLESPIE: - DEs: REYNOLDS, MITCHELL, DONALDSON, LAKE, MILES, WESSON; - APDs: HERBERT, DICKERSON, HUMPHREYS, OVERTON.

(g) 50.8.23 Carrier Escort - Captain F. T. Ward Jr.
CVE: SHAMROCK BAY; - DDs: KALK, WELLES.

In reserve at SAIPAN: AOs: NESHANIC, COSSATOT, NIOBRARA, ESCALANTE, PAMANSET, ENOREE.

In reserve at ULITHI: AO: GUADALUPE.

Total by types: 1 CL, 6 CVE, 11 DD, 18 DE, 34 AO, 4 APD, 4 ATF, 1 AKA, 2 AE.

245. Task Group ABLE (50.8.10) assembled in two detachments; one at ULITHI and one at ENIWETOK; departing from those bases on 8 and 9 February respectively, and effecting a juncture in Lat. 18°-10' N., Long. 153°-10' E. at 0700 on 12 February (D minus7). At 1000 on 13 February, the task group rendezvoused with the Fast Carrier Force (TF 58), and proceeded to refuel and replenish the latter, securing for the night at 1800, and completing the replenishment about 1100 on the 14th. BOUGAINVILLE (CVE) having transferred replenishment planes and pilots to TF 58, was despatched to GUAM under escort to take on a new load, rejoining on the 19th.

246. On 16 February, PATUXENT (AO) suffered an internal explosion from inflammable vapors, blowing out both sides of her bow for about 200 feet on each side. Fires developed immediately but were gotten under control, and PATUXENT was despatched to SAIPAN, escorted by SILVERSTEIN (DE).

247. At about 0700 on the 18th, in Lat. 19°N., Long. 140°E. Task Group BAKER (50.8.16) of the Logistic Support Group, which had left ULITHI on 16 February, joined Task Group ABLE. At 0700 on the 19th, the Logistic Support Group rendezvoused with TGs 58.1, 58.2, and 58.5 of the Fast Carrier Force in Lat. 23°N., Long. 140°E. and proceeded with replenishment, completing about 1700. NEOSHO was despatched to IWO JIMA to supply fuel to ships there.

248. At 0700 on the 20th, the group rendezvoused with TGs 58.2 and 58.3 in Lat. 23°N., Long. 140°E. for replenishment of planes, fuel, etc., completing by 1700. Three tankers were despatched to IWO JIMA to fuel vessels there, and three were despatched to ULITHI to fill up again. ATTU (Transport CVE), was despatched to GUAM to reload with planes and aviation supplies. On the 22nd, four APDs reported for duty to replace DEs detached to escort ships

returning to GUAM or ULITHI; and the fleet tugs UTE and THORN were despatched at high speed to the aid of BISMARCK SEA (CVE), damaged (and later sunk) in the vicinity of IWO JIMA. On 4 March the ATFs SIOUX and MOLALA were despatched to assist the DDs YARNALL and RINGGOLD, damaged in collision, and tow them to ULITHI.

249. The foregoing shows the general pattern of the Logistic Support Group's operations. The Fast Carrier Force (TF 58) was replenished again on the 23rd and 27th, and on the 3rd of March. Tankers were despatched to IWO JIMA as needed to refuel shipping there. Empty tankers returned to ULITHI for refill, were replaced by others, and themselves rejoined later. Escorting DDs and DEs rotated similarly. Tugs were sent to assist damaged vessels. Transport CVEs shuttled to and from GUAM, which was the advanced supply base for fleet airforce replenishment. The Group's own smaller vessels were topped off from time to time. Tankers running low would discharge their remaining cargo into other tankers, so as to expedite their own turn-around to ULITHI for a refill. There were various air and submarine alarms, but no actual attacks. One small Japanese boat was sunk by SILVERSTEIN (DE), and its crew taken prisoner. At 1600 on 3 March, the Logistic Supply Group headed back for ULITHI, for replenishment and rehabilitation in preparation for the next operation.

Service Squadron TEN.

250. This "floating navy-yard", under Commodore W. R. Carter, had its main base at ULITHI, though with representatives and some ships at ENIWETOK, GUADALCANAL, GUAM, and other forward points. ULITHI is a coral-reef atoll pure and simple, with practically no facilities or resources ashore other than a small airfield. It was not as close to the scene of operations as GUAM or SAIPAN, but it had the necessary large amount of protected anchorage area, which was no longer to be found near as our operations advanced from the atoll areas of the South Pacific into the area of volcanic islands to the northwest. How necessary was this anchorage area is shown by the following figures on the number of ships at ULITHI at different times during February. On February 1st, there was a total of 432; increasing to a maximum of 509 on February 6th; with a sudden drop to 290 after 9 February when most of the FIFTH Fleet had departed for the IWO JIMA operation. Thereafter the number remained between 290 and 260 until towards the end of the month, when it began to creep up as units returned from IWO JIMA, damaged or with their task completed.

251. The amount of repair work done by ServRon TEN is difficult to portray, since it varied from minor work on some piece of equipment, up to the lifting of turbines and putting new bows on ships that had lost them. During February alone, some 52 vessels were docked for repairs in the floating drydocks; mostly destroyers, but including almost every type from cargo ships down to PCs.

252. The following, while not couched in strictly official phraseology, gives some idea of the magnitude of the supply service furnished by Service Squadron TEN to the ships engaged in the IWO JIMA Operation during February:

> "Total fuel issues for the month were 4,100,000 barrels of fuel oil, 595,000 barrels of Diesel oil, 33,775,000 gallons of aviation gas, and 6,703,000 gallons of motor gas. This fuel oil would have filled a train of tank cars over 238 miles long, and the gasoline for

the planes would have run 30,700 American automobiles for a full year. Ammunition equivalent to 480 carloads was loaded into various ships. Enough food was issued -- fresh, frozen, and dry provisions to the equivalent of 1,450 car loads -- to have fed a city the size of Columbus, Ohio, for a month. Thirty eight tons of spare clothing were loaded aboard -- enough to completely clothe over a million and a half persons. Over 10,000 tons of Fleet freight was transferred to the ships, and ship's supplies (rope, canvas, fenders, swabs, etc.) were issued in excess of 17,000 tons. Over 3,000 tons of candy, tooth powder, stationery, toilet articles, etc., were transferred -- enough to stock 6,000 drug stores. Nine million gallons of fresh water were supplied."

Anti-Submarine Measures and Operations.

253. A development which would have been inconceivable at the beginning of the war was that such large groups of ships of all types and speeds could have been moved over vast distances, to and from an objective within 700 miles of the enemy's home bases; could be hove-to or anchored there for considerable periods in deep and open water with no shelter or mine and net protection; and yet suffer no damage from submarine attack by an enemy who, in the early days of the war, had been notably proficient in that arm. At times there were several hundred ships in the congested area off IWO JIMA, so that a "browning" shot could hardly have failed to hit something.

254. This immunity was due to the effective combination of continuous air patrol designed to keep enemy submarines from approaching on the surface; to a tight double cordon of screening vessels around the whole of IWO JIMA and the Transport and Fire Support areas; and to the availability of hunter-killer groups which took up the job of destroying or at least neutralizing enemy submarines that were contacted. Several submarine contacts were made; the nearest being some 45 miles from IWO JIMA, with evaluation as two possible kills. None of our vessels was damaged by submarine attack.

Air Support Control Unit Ashore.

255. For the first time in an amphibious operation in this theatre, the Air Support Control Unit was landed and set up ashore with the intention of actively controlling close troop support missions by our aircraft. This unit was composed of Marine and Naval officers (with the former predominating), and Marine enlisted technicians and operators. Landed on D plus 10, the liaison that this unit was able to accomplish by virtue of its proximity (75') to the Landing Force Command Post, far surpassed anything that has ever gone before in Air Support operations; and as a result, requests by troops for air support were run much more expeditiously than ever before. The Commander, Attack Force (CTF 53), states that a Landing Force Air Support Control Unit ashore is an absolute necessity in an amphibious operation of major proportions.

Damage to U. S. Vessels.

256. The following breakdown of the damage sustained by naval vessels participating in the operation may be of interest. There were of course many instances of minor operational damage not included herein.

Date	Ship	Damage
	By Suicide Planes:	
18 Feb.	GAMBLE (DM)	Major
21 Feb.	BISMARCK SEA (CVE)	Sunk
21 Feb.	SARATOGA (CV)	Major
21 Feb.	LUNGA POINT (CVE)	Minor
21 Feb.	KEOKUK (AKN)	Minor
21 Feb.	LST 477	Major
	By Bomb Hits:	
18 Feb.	BLESSMAN (APD)	Major
	By Shore Batteries:	
17 Feb.	LEUTZE (DD)	Major
17 Feb.	TENNESSEE (BB)	Minor
17 Feb.	PENSACOLA (CA)	Major
17 Feb.	LCI(G) 474	Sunk
17 Feb.	LCI(G) 438,441,449, 450,457,466,469,473	Major
17 Feb.	LCI(G) 346,348,471	Minor
23 Feb.	LSM 46,47	Minor
25 Feb.	LCI 760	Minor
26 Feb.	HAMLIN (AV)	Minor
27 Feb.	LEO (AKA)	Minor
27 Feb.	LST 884	Minor
28 Feb.	TERRY (DD)	Major
1 Mar.	COLHOUN (DD)	Minor
2 Mar.	BILOXI (CL)	Minor
	Mortar Fire While Beached:	
19 Feb.	LSMs 74,145,211,323	Major
20 Feb.	LSM 216	Minor
23 Feb.	LSM 46,47	Minor
27 Feb.	LSM 792	Minor
28 Feb.	LST 42	Minor
	Collision:	
14 Feb.	HALFORD (DD) and	Major
	H.E.STEPHENSON (MV)	Minor
16 Feb.	BARTON (DD) and	Major
	INGRAHAM (DD)	Minor
19 Feb.	ESTES (AGC) and	Minor
	CHESTER (CA)	Major
20 Feb.	LSM 59 and LCI 54	Minor
21 Feb.	NAPA (APA) and	Major
	LOGAN (APA)	Minor
23 Feb.	LSTs 390 and 807	Minor
24 Feb.	FULLER (APA)	Minor
24 Feb.	H.L. EDWARDS (DD) and	Minor
	BRYANT (DD)	Minor

Date	Ship	Damaged
	Struck Reef or Obstruction:	
20 Feb.	BRADFORD (DD)	Minor
22 Feb.	NAWMAN (DE)	Minor
2 Mar.	HERCULES (AK)	Minor
	Alongside Other Vessels:	
18 Feb.	WASHINGTON (BB) and	Minor
	HAILEY (DD)	Minor
20 Feb.	INDIANAPOLIS (CA) and	Minor
	SHASTA (AE)	Minor
21 Feb.	LSM 43	Minor
22 Feb.	LSM 145	Minor
24 Feb.	WILLIAMSON (DD)	Minor
24 Feb.	PC 578	Minor
27 Feb.	LSM 779	Minor
28 Feb.	PRES. ADAMS (APA)	Minor
2 Mar.	BERRIEN (APA)	Minor
6 Mar.	YANCEY (AKA)	Minor
	Sea Damage:	
21 Feb.	LSM 43	Minor
24 Feb.	MOALE (DD)	Major
24 Feb.	LSMs 202,241	Minor
26 Feb.	PRESTON (DD)	Minor
26 Feb.	STEPHEN POTTER (DD)	Minor
26 Feb.	J. W. WEEKS (DD)	Minor
26 Feb.	COLAHAN (DD)	Minor
26 Feb.	BENHAM (DD)	Minor
26 Feb.	HALSEY POWELL (DD)	Minor
26 Feb.	SAN FRANCISCO (CA)	Minor
	Operational:	
19 Feb.	UHLMANN (DD)	Minor
19 Feb.	STARR (AKA)	Minor
23 Feb.	LST 716; YMS 361	Minor
23 Feb.	PC 877; LSM 92	Minor
23 Feb.	SOLACE (AH)	Minor
24 Feb.	SC 1027; HOWARD (DMS)	Minor
27 Feb.	LST 775; LSMs 60,44	Minor
27 Feb.	LSMs 47,140,261	Minor
1 Mar.	LSM 59	Major
2 Mar.	LST 634	Minor
2 Mar.	NEW YORK (BB)	Major
	Miscellaneous:	
15 Feb.	LSM 169 (Mined)	Major
17 Feb.	WALDRON (DD), rammed Jap picket boat	Minor
19 Feb.	PATUXENT (AO), internal explosion	Major

Date	Ship	Damage
	Collision (cont'd)	
24 Feb.	LSM 49 and LCI 356	Minor
26 Feb.	LST 121 and LSM 140	Minor
27 Feb.	COLHOUN (DD) and LIBRA and KNOX (AKAs)	Minor Minor
2 Mar.	LST 224 and LCS 52	Minor
4 Mar.	YARNALL (DD) and RINGGOLD (DD)	Major Major

Date	Ship	Damage
	Miscellaneous (cont'd)	
19 Feb.	SAMARITAN (AH), 5" hit, friendly	Minor
22 Feb.	DEWEY (DD), augmentation of damage from December typhoon.	Minor
25 Feb.	PORTERFIELD (DD), fire from Jap picket boat	Minor.
25 Feb.	PASADENA (CL), fire from Jap picket boat	Minor
2 Mar.	BENNETT (DD), dud bomb or torpedo underwater	Minor

Replenishment of Ammunition.

257. The replenishment of ammunition between ships steaming ahead in the open sea proved feasible. SHASTA (AE) of TF 50.8 rearmed some of the carriers in this manner, transferring 64,700 pounds of bombs to HORNET in 1 hour, 55 minutes; 37,400 pounds to BENNINGTON in 1 hour, 01 minutes; 28,300 pounds to WASP in 58 minutes. Bombs ranged from 100 to 2000 pounds in size. The striking-below crews were unable to keep pace with the transferring crews. SHASTA could have doubled the replenishment rate by taking a ship on each side, with some relocation of boat stowage and top side arrangement. This method can be expected to give even better results as experience is gained and the most appropriate rig devised.

258. In contrast, attempts to transfer ammunition between an AE and a combatant ship hove-to and lying alongside of each other were not successful, for despite the liberal use of fenders and small camels, and taking advantage of such lee as IWO JIMA afforded, the swell made the ships grind into each other. INDIANAPOLIS (CA) and SHASTA both suffered minor damage while trying it on 21 February, and had to complete the operation by boat. The foregoing of course does not mean that rearming or refueling underway is intrinsically faster than doing it alongside, but merely that the former may be practicable when lack of smooth water prevents the latter entirely.

Loss of BISMARCK SEA.

259. On the afternoon and evening of 21 February, BISMARCK SEA (CVE), in company with five other CVEs of the Support Carrier Group, was cruising in the operating area approximately 20 miles east of IWO JIMA. At 1715, the ship went to General Quarters because of bogeys in the area. By 1815, all BISMARCK SEA planes had been landed, as well as three TBMs from other carriers. To handle the three extra planes it was necessary to send four fighters, which had not been degassed, to the hangar deck, completely filling that space.

260. About this time, various bogies were seen at a distance and then disappeared, and at 1845, several were picked up at 10 miles and observed visually soon thereafter, heading towards BISMARCK SEA's sector. Sunset had occurred at 1825, and only half-light remained. Battery 2 had taken under fire a plane on the port bow and "splashed" it, and a few seconds thereafter a second one came in low on the water, at about 25 feet altitude, heading directly for the starboard side of the ship. The after guns took it under fire from the time it was

clearly seen at about 1000 yards until the guns could depress no further, and tracers indicated hits. This plane struck the ship abeam of the after elevator, scattering four torpedoes from the starboard rack around the deck and doing other serious damage. The after fire main was ruptured, and there was no water supply when the water curtains and sprinklers were turned on. Hoses were run from forward, and the fire appeared controllable until a second heavy explosion occurred some two minutes later, which killed a large number of the fire fighters. This was caused by a second enemy plane which, although not seen from the bridge area, came in vertically through the flight deck.

261. The entire rear of the hangar deck, and the bulkheads on the gallery deck, were blown out. The deck of the clipping rooms above was apparently ruptured, and a quantity of 20 or 40-mm ammunition began exploding, making the area untenable. All hands were blown off the fantail, and the after part of the ship became an inferno. The starboard side of the gallery area was on fire, and indications were that it had been blown down into the after mess hall area. At 1900 the commanding officer gave the order to abandon ship, which was done in an orderly manner, the word being passed over the bull-horns to take the life rafts out of the planes. Communication to the OTC was out, but adjacent ships commenced picking up the survivors. A third and very large explosion (possibly from torpedoes) occurred, rocking the ship and blowing the after structure apart. A heavy list developed to starboard, which increased until the ship rolled over, finally sinking at 2115.

262. It was dark and the sea was rough, making conditions for rescue unfavorable. Several survivors reported that a Japanese plane strafed them in the water. Three DDs and three DEs engaged in the rescue work initially, and the search was turned over by CTG 52.2 to the BISMARCK SEA's commanding officer, who had been picked up by EDMONDS (DE). A lighted buoy was put in the water by EDMONDS where the ship went down, to be used as a reference point. Search was continued throughout the night, aided by other vessels and planes on the following day. Surviving personnel were placed on board the APAs DICKENS and HIGHLANDS at IWO JIMA about 1300 on 22 February. Total lives lost were 347, with 20 wounded.

263. After speaking highly of the efficiency and devotion to duty with which the search and rescue was conducted, in addition to the superb conduct of BISMARCK SEA's own personnel, her commanding officer makes the following pertinent recommendations in his report:

> "Hold swimming call as a drill for all hands to increase their familiarity whenever practicable, and have them blow up their life belts in the water by mouth.
>
> "Keep up the athletic programs for all hands. The loss by drowning among the pilots and aircrewmen, who had been continuously exercised, was far less than in other categories.
>
> "All hands should carry the small waterproof flashlights. Those having them were easily picked up from the water and their use bolstered confidence.
>
> "Advise all recovery vessels to drop an electrically lighted buoy in the water as a reference point when picking up large numbers of personnel in the dark.

"Drill all hands on the advisability of going over the windward side if practicable, if abandoning ship becomes necessary.

"Emphasize the necessity for calmness and conserving strength while in the water, because extra energy is required to climb the side of a ship or even a boat, or to hold on to a line.

"Use all the rubber rafts from the planes. The men were told to do this over the loud speaker, and it was very helpful.

"Emphasize the need for staying in groups in the water."

Use of APBs (LSTs converted into Barracks Ships, Self-Propelled).

264. A novel feature of warfare in the Pacific is the use of APBs (Barracks Ship, Self-Propelled), which are LSTs converted into tenders for servicing small craft. The following data on the capacity of U.S.S. PRESQUE ISLE (APB-44) is of interest:

FUEL: - 235,000 gallons. Oil can be purified at the rate of 6000 gallons per day.

WATER: - 119,000 gallons. Approximately 20,000 gallons can be distilled per day.

PROVISIONS: - 200 tons dry; 100 tons frozen; 150 tons fresh.

BERTHING: - 40 transient officers and 300 enlisted men.

SICK BAY: - 14 bed patients.

MESSING: - 750 men can be served at a meal. Meals are served on a continuous, round the clock basis.

DISBURSING: - All disbursing functions carried on. Stamp and Postal Money Order Service in limited amounts.

265. During the 10-day period from D Plus 2 to D Plus 11 (inclusive) at IWO JIMA, PRESQUE ISLE provided the following services:

Fueled 33 ships, delivering a total of 155,900 gallons. Provisioned 47 ships, delivering a total of 189,034 pounds of fresh and dry provisions. Watered 46 ships, delivering 113,600 gallons. Berthed a total of 226 officers and men and subsisted 1225 (each figure for 1 man/1 day).

266, The ships serviced included DD, DE, AOG, DMS, LST, LSM, AM, PC, LCI, LCS, YMS, SC, LCT, and ATR types.

267. PRESQUE ISLE herself replenished and refueled from APA, AKA, and AOG at the objective.

268 None of her facilities were overtaxed or even utilized to their fullest extent, and the commanding officer stated that other ships might not all be familiar with her mission. He estimated that 25 ships per day could be handled.

269. In addition to the foregoing primary services, the APBs endeavor to take care of all requests, and be of as much service as possible. This includes minor repairs to gyro equipment, refrigerator systems, main propulsion, and small boats; packing lunches, providing critical replacement items that the APB can spare, providing boat service for transients to get to the "job", and providing clothing, ship's service items, etc. to survivors.

Amphibious Vehicles.

270. Although there was no problem of a fringing reef at IWO JIMA, the usefulness of the LVT and DUKW has never been more clearly shown. During periods of unfavorable surf conditions, they were the only effective carriers, and performed yeoman service in operating directly between ships in the transport area and the front line elements.

ANNEX B.

COMMENTS.

Get It In The Action Report!.

1. Many times, especially in the old days (now fortunately behind us) when our forces were on the defensive, combatants who had encountered some particularly effective form of enemy trickery were told, "That shouldn't have caused you any trouble; they pulled the same thing on us back in Boola-Gaboola". To which the answer naturally is: "Why doesn't somebody tell us these things?" - - and the answer would be right; vital information should never be kept from those who need to know.

2. Even now, though with lessening frequency, we read of minor mistakes and oversights being repeated, in spite of constant effort by planning agencies to incorporate the best thought and most up-to-date techniques in each Operation Plan.

3. The experience of commanders in the higher echelons is naturally available, and is relied upon by planners in preparation for each succeeding operation. Yet these commanders, during an operation, have the responsibility for the control of large and wide-spread forces; they cannot be everywhere and see everything. It therefore becomes essential for the lower echelon commanders, down to and including commanding officers of individual ships (except possibly the smaller ships operating as a group) to provide the higher echelons with the information needed for future plans and operating procedure.

4. The principal sources of such information are action reports submitted by ships and operational commands, and unless these action reports present the salient and important facts, they will be lost until an unfortunate repetition again brings them to attention in the hard way.

5. Statistical agencies may require a mass of detail in these reports: how much and what kind of ammunition was expended; the exact time each wave hit the beach; how many men and weapons each boat carried, etc. On the other hand, the information most needed for future operations will be along the following lines: what was unusual about the action? - - what new methods were employed by our forces and the enemy? - - what were the salient features of the operation? - - what lessons were learned? - - what can you suggest that will improve future operations?

6. Such vital information should not be buried in the chronological and detailed account; it should be displayed prominently under "Special Comments", or under "Lessons, Conclusions, and Recommendations", and given due emphasis. Forwarding authorities may not agree with your conclusions, by reason of possessing special knowledge and information from wider sources; but if even a small percentage of your personal observations results in saving lives in the future, or in adding power to the offensive, the effort will be well worth while.

Are Bows Really Necessary?

7. On 0513 on 4 February, during simulated night torpedo attack against BatRon TWO, the DDs RINGGOLD and YARNALL were in collision in Lat. 12°-15' N., Long. 138°-08' E. RINGGOLD's bow was cut off at about frame 25 and her starboard

side badly buckled, but she was able to proceed to ULITHI under her own power. YARNALL's bow aft to frame 30 was displaced to starboard through an angle of about 30°, with many compartments flooded. Her bow worked dangerously in the seaway when under her own power, and she was taken in tow, stern first, by the tug MOLALA (ATF). The tug had difficulty making headway owing to the rudder action of the bent bow, and a speed of only 2.4 knots was made good during the first night. At 1840 on the 5th, YARNALL's damaged bow broke off completely and sank without further damage to the vessel, with the result that the towing was much eased. The advance was increased to 4.1 knots, and they reached ULITHI on the morning of 7 March. Apparently in some cases a bow is a luxury but not a necessity!

Towing over Your Bow.

8. The gallant attempt of the U.S.S. PREBLE (DM) to pull both herself and the sinking PERRY stern first out of a mine field off ANGAUR Island last September emphasizes the fact, perhaps not fully realized by every young shiphandler, that nothing in the Navy Regulations, Knight's Seamanship, or common sense prohibits putting a line through the bow chock when one wants to tow something, and then backing away with it. This may often be much smarter than trying to do it by the stern in conventional fashion, if maneuvering room is limited, or time is precious.

9. As an example, take the situation where a lighter has gone adrift, has been set close in to shore or into other danger by wind or tide, and you are dashing to retrieve it. You will have to be not only very good but lucky if you succeed in putting your rudder over at just the right moment, swinging through perhaps 180° without getting too close to the shore or other danger, killing your speed, backing down perhaps, and winding up with your bow heading towards safety, and with your stern within easy line-running distance of the lighter. Having done so, you still have the head-aches of being poorly situated on the bridge to see your own fantail or to judge distance to the lighter, of having to rely on uncertain telephone communication aft, of having lines over where they can indulge their diabolic propensity for fouling your propellers at a critical juncture, and of having your stern swing sluggishly to the rudder after the tow-line has a strain on it.

10. As contrasted to this you could have headed straight in, laid your bow close enough to have stepped aboard the lighter or to have hooked it with a grapnel, cussed out your forecastle gang without even a magaphone to aid, and easily swung your stern to port or starboard while backing away with your tow. Naturally it is not advised that you tow that way clear back from IWO JIMA to SAN FRANCISCO; but when well clear of the danger, and with plenty of sea-room, you will presumably shift ends and make an orthodox towing job of it. Tug boat men do this all the time. By the same general reasoning, a ship that is out of control and close to danger may be given a line to her stern instead of her bow if that will get her out of trouble quicker.

The Price and the Gain at IWO JIMA.

11. There may well be those; Army and Navy as well as civilian, who, through unfamiliarity with all the strategic and tactical considerations involved, may be inclined to regret the huge effort made and the price paid in life, material and time, for the capture of such an unprepossessing and hitherto

obscure speck of territory as IWO JIMA, with its narrow confines, barren surface, and utter lack of anything to recommend it except its location. There is a certain pyschological twist involved here. Had IWO JIMA been of imposing extent on the map, had it been a famous fortress like GIBRALTAR with a tradition of invincibility, had its name conveyed an impression of frowning bastions and battlements, moats and parapets, escarps and counter-scarps, or had it been both modern and publicized like the ill-fated "Maginot Line", there would have been no criticism of the time and cost of taking it, but rather wonder at its ever being taken at all. It is therefore pertinent to summarize briefly what made it so difficult to take, and what we gained by it.

12. It is an undefined principle of defensive strategy that there is a certain optimum extent of front or area to be defended, and strength in troops and installations there to defend it. If the front or area be too great, it then becomes impossible, even for a nation with great resources, to cover it adequately with prepared positions and forces to man them. It then becomes necessary either to spread the defense dangerously thin, leaving it vulnerable to a break through; or to concentrate the defense, in which case it may be outflanked or out-maneuvered. But on the other hand, if the front or area to be defended is too small, and the full power of the attackers' land, sea, and air power is concentrated against it, the very density of the defense then insures that it will suffer the maximum destructive effect from every missile striking; and the attackers will simply blast their way through, pulverizing all opposition.

13. Somewhere between these two extremes lies the "optimum", and IWO JIMA appears to have been close to this "optimum" in size and density of defense. Its small size, far from implying weakness, was a source of strength. It had no extensive coast line, affording to the attackers a choice of numerous landing points, where the invading troops would meet little opposition, either on the beaches or in subsequent deployments for advance against enemy positions. It was too small for the attackers, once ashore, to capitalize on their superior numbers and thus to make the enemy either over-extend his front or leave himself vulnerable to outflanking or to swift penetration. On the other hand, it was too large, and the defensive positions spread over it were too well concealed and protected,for the battle to be settled quickly by drenching the whole area in the fire which even our vast assemblage of ships, planes, and artillery was capable of providing. There was nothing to do but take it on foot, the hard way.

14. The difficulties encountered by our troops ashore have been touched on in the main narrative of this operation, and will not be repeated. The Japanese had no "lines" in the ordinary sense. Their strategy was a defense in depth, and the depth was the full extent of the island. A line drawn anywhere across it would have been a fortified line, since it would have passed through a continuous series of prepared positions. The defenders were dedicated to making the attackers pay heavily at every step, and although without concern for their own ultimate fate, were skillfully prolonging their survival so as to exact the heaviest toll. They knew the probable fire power that would be brought against them, and had realized the truism of modern warfare that whatever projects above the surface can be discovered and located, that whatever can be definitely located can be hit, and that whatever can be hit can be destroyed if enough heavy missiles and high explosives are expended on it. They had therefore gone underground for protection against our fire more thoroughly and effectively than in any battle, past or present that we have record of, while remaining ready to man

their positions on the surface with mortars, machine guns, and other portable weapons the instant our barrage was lifted and our troops started to attack. Small wonder then that every foot of ground had to be won slowly and at heavy cost to the men inching forward with hand weapons on foot, for there was no other way of doing it.

15. As to what we gained by its capture: IWO JIMA was important solely as an air-base. True, we were already bombing JAPAN from the MARIANAS and would continue to do so, but the fact must be realized that air-power (like any other power) suffers a reduction with the distance over which it operates, just as electric current suffers a drop in potential or as a flow of water loses pressure, in proportion to the length of the conductor or pipe that carries it. An airfield nearer to TOKYO along the NANPO SHOTO chain was a necessity so that fighter planes could cover the B-29s on a flight to JAPAN, and thereby cut down the attrition they were suffering when unprotected. It tended to reduce operational losses also. The following quoted from a war correspondent at IWO JIMA illustrates the point. Writing as of 29 April he says:

> "The U.S. Marines paid 4189 dead for this bleak little island on the road to TOKYO, but already nearly half that number have been saved by its presence in American hands, which has permitted more than 200 Superforts to make emergency landings here. With 11 men to each B-29 crew, more than 2000 have been brought to safety on IWO's air strips since mid-March. Some of them might have been saved by air-sea rescue service, but a majority of them would have been lost when their planes, shot up or out of gasoline, made forced landings in the cold waters of the Pacific. On IWO's record day, 61 B-29 were stacked in the island's airfields after emergency landings en route home from JAPAN."

16. Yet even this is only one corner of the whole picture. There are of course to be considered all the B-29s that have been and will be saved by having fighter protection from IWO JIMA. There is the protection to planes, ships, and structures at GUAM, SAIPAN, and TINIAN which were within range of possible Japanese air raids as long as the enemy still held IWO. And there is a chain of other factors whose effect in time, life, and effort can only be surmised. The possession of IWO JIMA has facilitated the taking of OKINAWA, and undoubtedly saved lives in that operation. With both these bases in our hands, the noose of air power and sea power will be drawn tighter and tighter around JAPAN. Whether strategic bombing alone can now bring about the final collapse of JAPAN remains to be seen; but the greater its contribution, the more it will have hinged on the capture not only of IWO JIMA but on that of the numerous other stepping-stones which we have paid for in blood, and by which we have finally arrived within striking distance. To deprecate the strategy of "Island Hopping" in favor of nebulous proposals for a more direct advance or for "blockading" JAPAN, is simply blinding oneself to realities. It is reminiscent of the nouveau-riche lady who told the skipper of her yacht: "Don't stop to do any tacking; just sail right on home"!

SECRET

ALLIED AIR STRIKES
FEBRUARY 1945
CENTRAL, SOUTH, SOUTHWEST PACIFIC

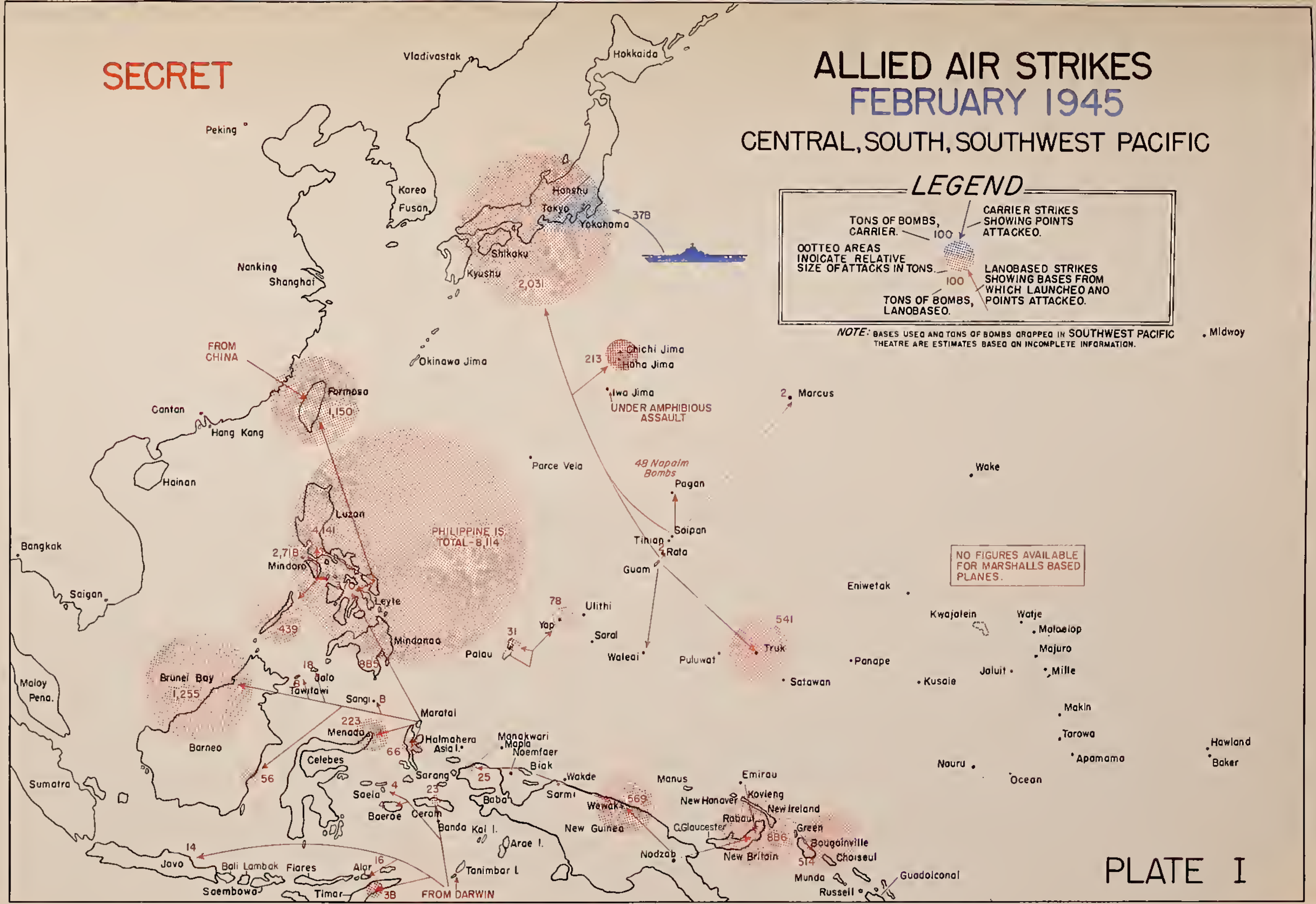
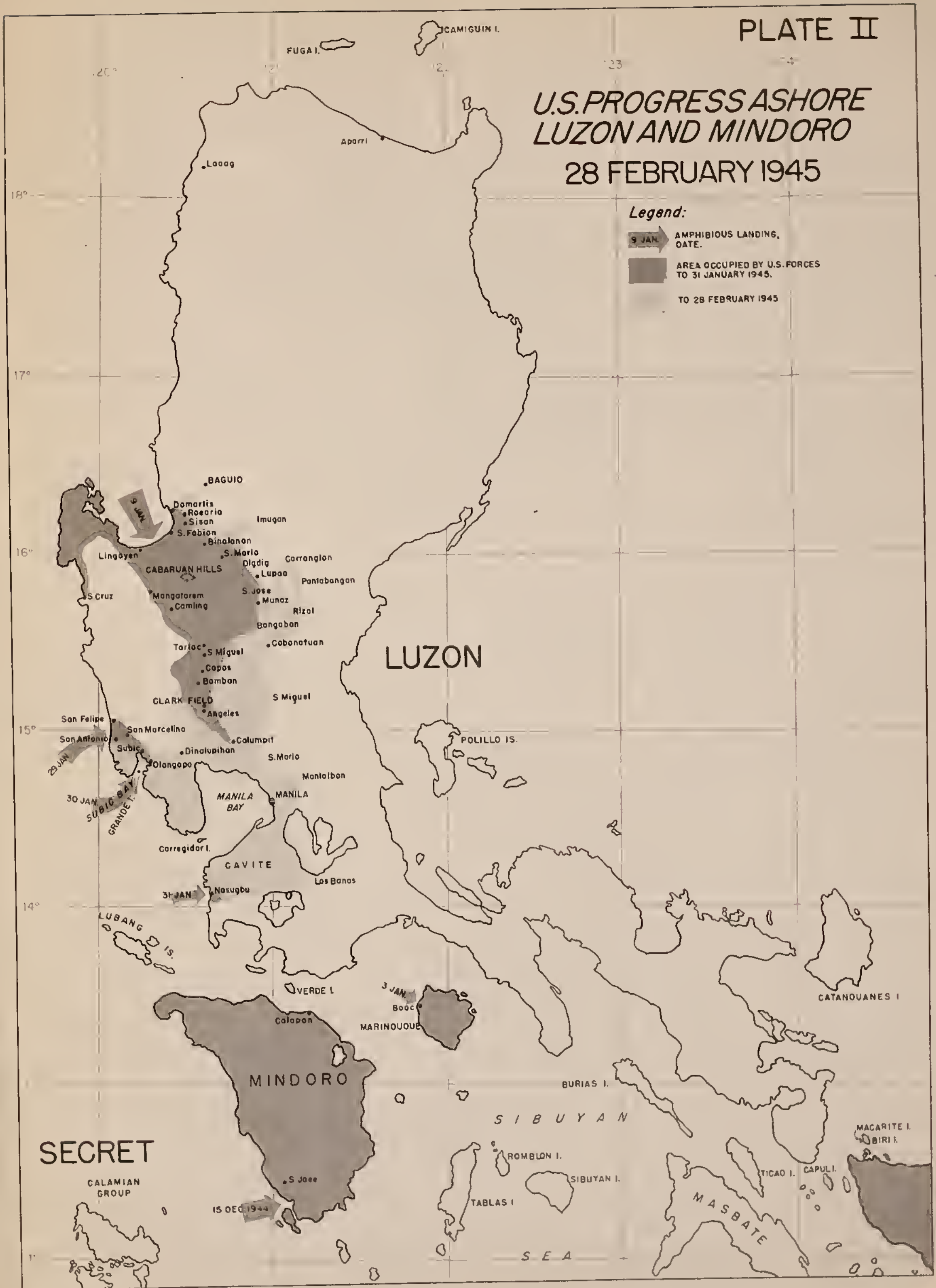


PLATE I

PLATE II

U.S. PROGRESS ASHORE LUZON AND MINDORO

28 FEBRUARY 1945



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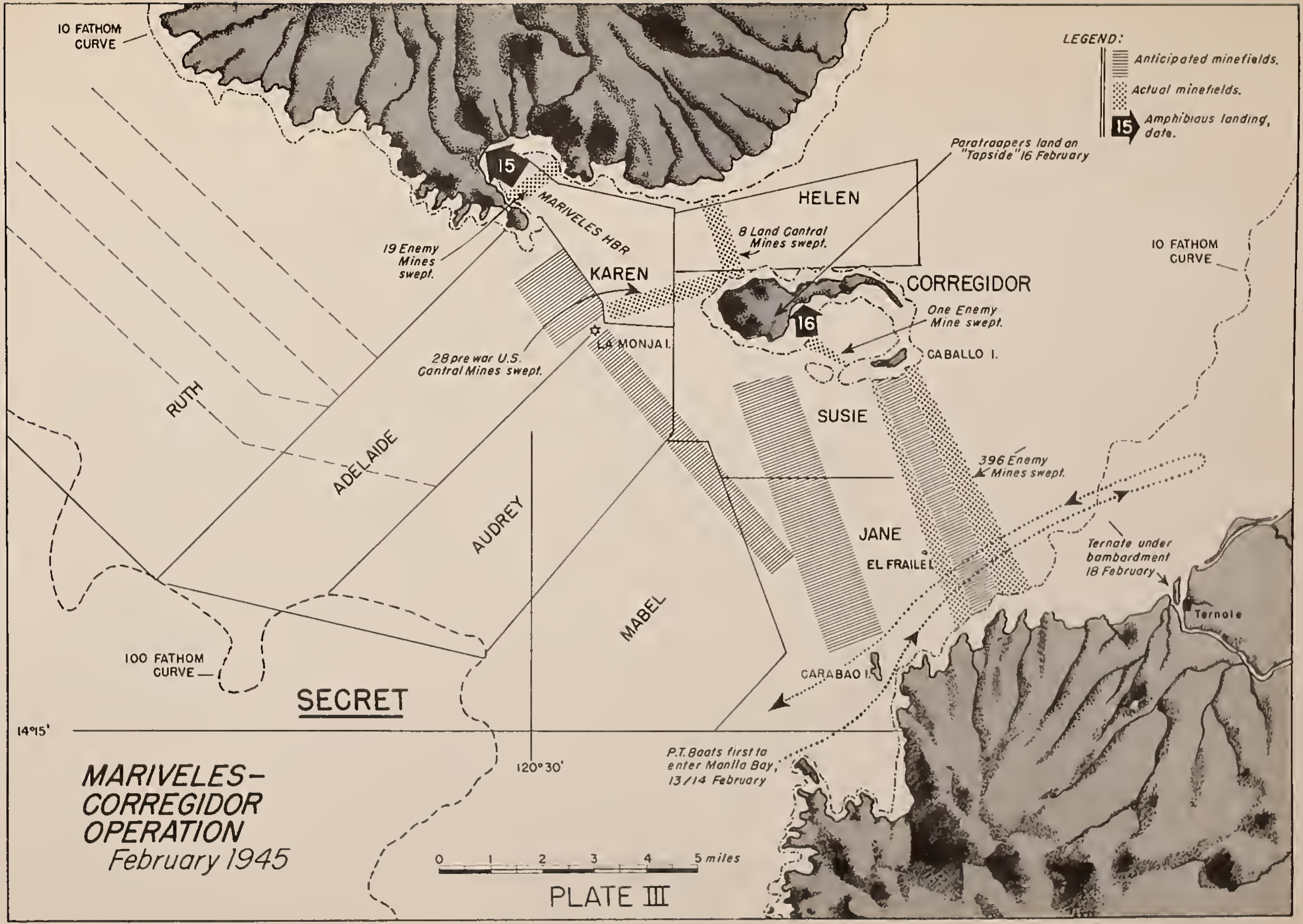
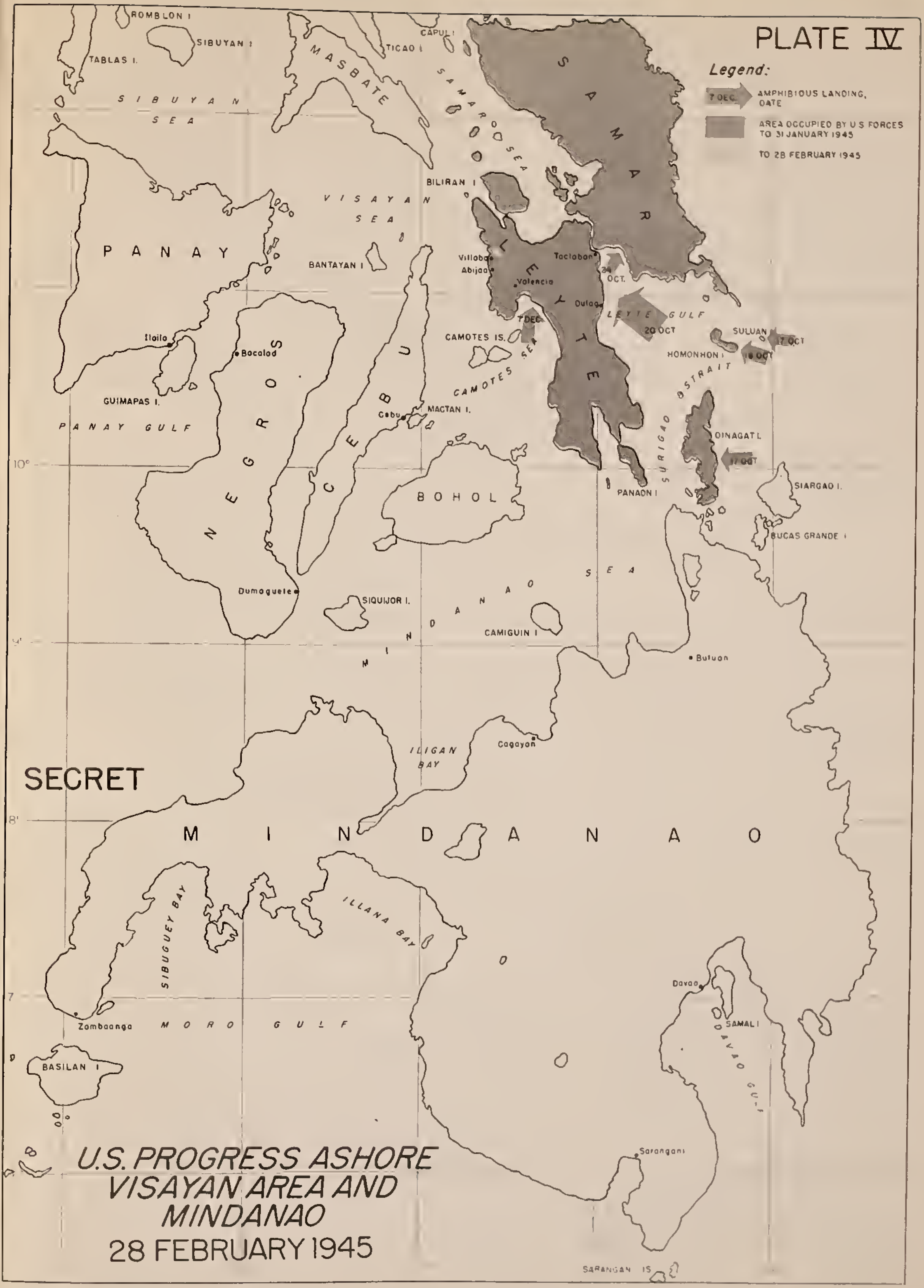


MARIVELES-CORREGIDOR OPERATION
February 1945

PLATE III

PLATE IV

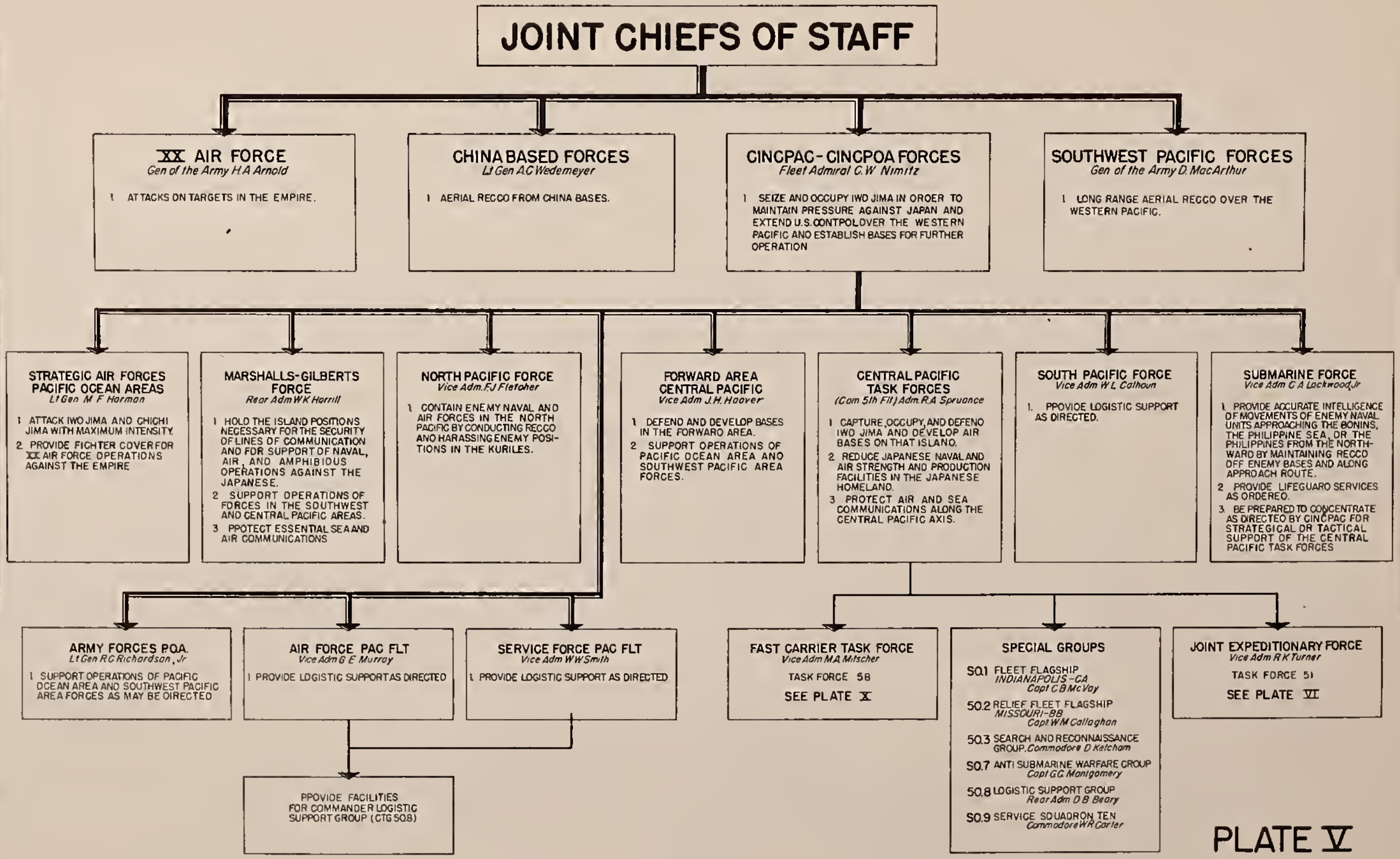
SECRET



U.S. PROGRESS ASHORE
VISAYAN AREA AND
MINDANAO
28 FEBRUARY 1945

SECRET

COMMAND RELATIONSHIPS AND TASKS ASSIGNED TO PRINCIPAL COMMANDS FOR THE *IWO JIMA OPERATIONS*



JOINT CHIEFS OF STAFF

XX AIR FORCE
Gen of the Army H.A Arnold
1 ATTACKS ON TARGETS IN THE EMPIRE.

CHINA BASED FORCES
Lt Gen A.C Wedemeyer
1 AERIAL RECCO FROM CHINA BASES.

CINCPAC - CINCPOA FORCES
Fleet Admiral C.W Nimitz
1 SEIZE AND OCCUPY IWO JIMA IN ORDER TO MAINTAIN PRESSURE AGAINST JAPAN AND EXTEND U.S. CONTROL OVER THE WESTERN PACIFIC AND ESTABLISH BASES FOR FURTHER OPERATION

SOUTHWEST PACIFIC FORCES
Gen of the Army D. MacArthur
1 LONG RANGE AERIAL RECCO OVER THE WESTERN PACIFIC.

STRATEGIC AIR FORCES PACIFIC OCEAN AREAS
Lt Gen M F Harmon
1 ATTACK IWO JIMA AND CHICHI JIMA WITH MAXIMUM INTENSITY.
2 PROVIDE FIGHTER COVER FOR XX AIR FORCE OPERATIONS AGAINST THE EMPIRE

MARSHALLS-GILBERTS FORCE
Rear Adm W K Harrill
1 HOLD THE ISLAND POSITIONS NECESSARY FOR THE SECURITY OF LINES OF COMMUNICATION AND FOR SUPPORT OF NAVAL, AIR, AND AMPHIBIOUS OPERATIONS AGAINST THE JAPANESE.
2 SUPPORT OPERATIONS OF FORCES IN THE SOUTHWEST AND CENTRAL PACIFIC AREAS.
3 PROTECT ESSENTIAL SEA AND AIR COMMUNICATIONS

NORTH PACIFIC FORCE
Vice Adm. F.J Fletcher
1 CONTAIN ENEMY NAVAL AND AIR FORCES IN THE NORTH PACIFIC BY CONDUCTING RECCO AND HARASSING ENEMY POSITIONS IN THE KURILES.

FORWARD AREA CENTRAL PACIFIC
Vice Adm J.H. Hoover
1 DEFEND AND DEVELOP BASES IN THE FORWARD AREA.
2 SUPPORT OPERATIONS OF PACIFIC OCEAN AREA AND SOUTHWEST PACIFIC AREA FORCES.

CENTRAL PACIFIC TASK FORCES
(Com 5th Flt) Adm. R.A Spruance
1 CAPTURE, OCCUPY, AND DEFEND IWO JIMA AND DEVELOP AIR BASES ON THAT ISLAND.
2 REDUCE JAPANESE NAVAL AND AIR STRENGTH AND PRODUCTION FACILITIES IN THE JAPANESE HOMELAND.
3 PROTECT AIR AND SEA COMMUNICATIONS ALONG THE CENTRAL PACIFIC AXIS.

SOUTH PACIFIC FORCE
Vice Adm W L Calhoun
1. PROVIDE LOGISTIC SUPPORT AS DIRECTED.

SUBMARINE FORCE
Vice Adm C A Lockwood, Jr
1 PROVIDE ACCURATE INTELLIGENCE OF MOVEMENTS OF ENEMY NAVAL UNITS APPROACHING THE BONINS, THE PHILIPPINE SEA, OR THE PHILIPPINES FROM THE NORTHWARD BY MAINTAINING RECCO OFF ENEMY BASES AND ALONG APPROACH ROUTE.
2 PROVIDE LIFEGUARD SERVICES AS ORDERED.
3 BE PREPARED TO CONCENTRATE AS DIRECTED BY CINCPAC FOR STRATEGICAL OR TACTICAL SUPPORT OF THE CENTRAL PACIFIC TASK FORCES

ARMY FORCES P.O.A.
Lt Gen R C Richardson, Jr
1 SUPPORT OPERATIONS OF PACIFIC OCEAN AREA AND SOUTHWEST PACIFIC AREA FORCES AS MAY BE DIRECTED

AIR FORCE PAC FLT
Vice Adm G E Murray
1 PROVIDE LOGISTIC SUPPORT AS DIRECTED

SERVICE FORCE PAC FLT
Vice Adm W W Smith
1 PROVIDE LOGISTIC SUPPORT AS DIRECTED

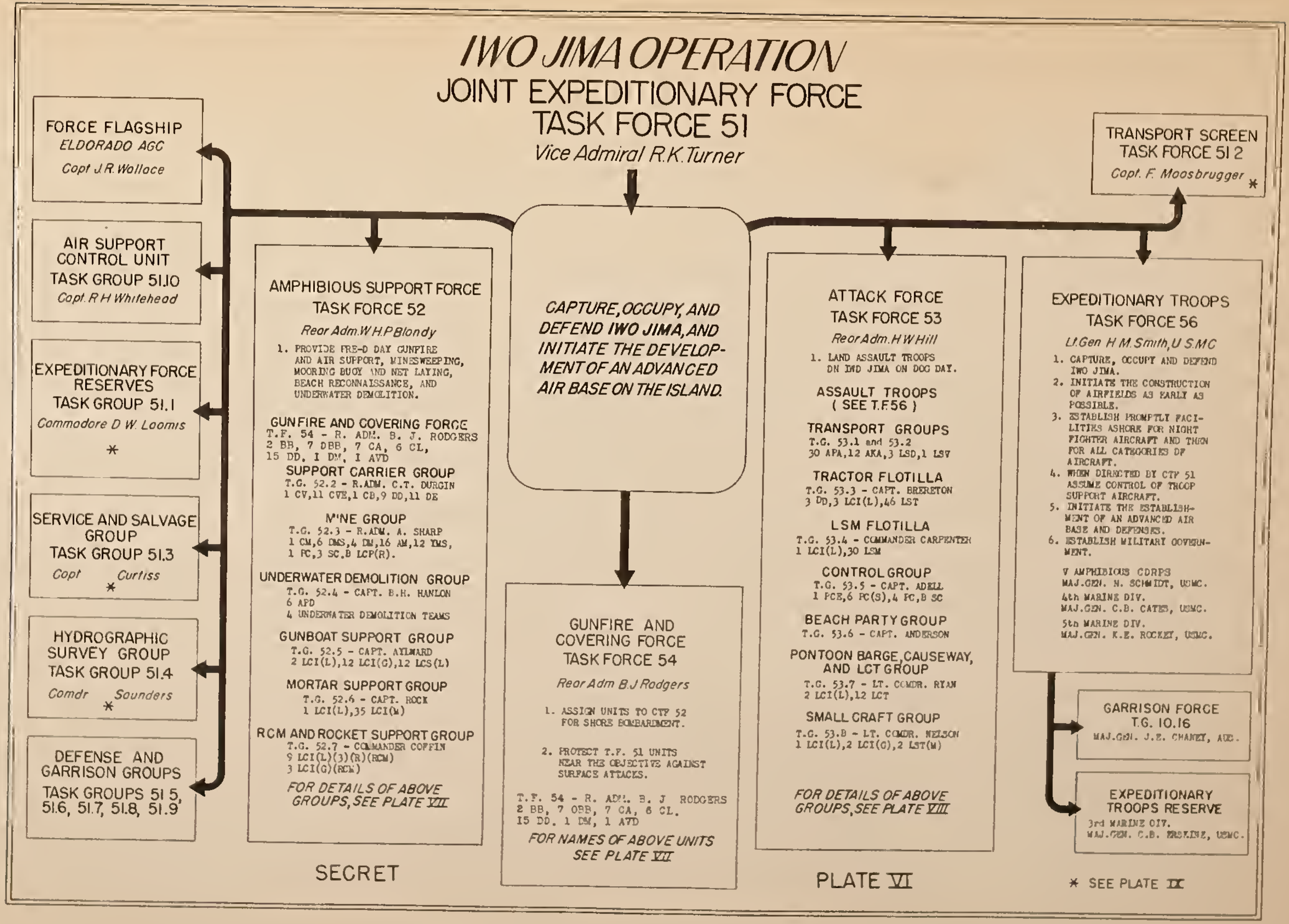
PROVIDE FACILITIES FOR COMMANDER LOGISTIC SUPPORT GROUP (CTG 50.8)

FAST CARRIER TASK FORCE
Vice Adm M.A Mitscher
TASK FORCE 58
SEE PLATE X

SPECIAL GROUPS
50.1 FLEET FLAGSHIP *INDIANAPOLIS - CA* *Capt C B McVay*
50.2 RELIEF FLEET FLAGSHIP *MISSOURI - BB* *Capt W M Callaghan*
50.3 SEARCH AND RECONNAISSANCE GROUP. *Commodore D Ketcham*
50.7 ANTI SUBMARINE WARFARE GROUP *Capt G.C. Montgomery*
50.8 LOGISTIC SUPPORT GROUP *Rear Adm D B Beary*
50.9 SERVICE SQUADRON TEN *Commodore W R Carter*

JOINT EXPEDITIONARY FORCE
Vice Adm R K Turner
TASK FORCE 51
SEE PLATE VI

PLATE V



IWO JIMA OPERATION

JOINT EXPEDITIONARY FORCE
TASK FORCE 51

Vice Admiral R.K.Turner

CAPTURE, OCCUPY, AND DEFEND IWO JIMA, AND INITIATE THE DEVELOPMENT OF AN ADVANCED AIR BASE ON THE ISLAND.

FORCE FLAGSHIP
ELDORADO AGC
Capt J.R.Wallace

AIR SUPPORT CONTROL UNIT
TASK GROUP 51.10
Capt. R.H Whitehead

EXPEDITIONARY FORCE RESERVES
TASK GROUP 51.1
Commodore D W. Loomis
*

SERVICE AND SALVAGE GROUP
TASK GROUP 51.3
Capt Curtiss
*

HYDROGRAPHIC SURVEY GROUP
TASK GROUP 51.4
Comdr Saunders
*

DEFENSE AND GARRISON GROUPS
TASK GROUPS 51.5, 51.6, 51.7, 51.8, 51.9

AMPHIBIOUS SUPPORT FORCE TASK FORCE 52

Rear Adm.W.H.P.Blondy

1. PROVIDE PRE-D DAY GUNFIRE AND AIR SUPPORT, MINESWEEPING, MOORING BUOY AND NET LAYING, BEACH RECONNAISSANCE, AND UNDERWATER DEMOLITION.

GUNFIRE AND COVERING FORCE
T.F. 54 - R. ADM. B. J. RODGERS
2 BB, 7 OBB, 7 CA, 6 CL,
15 DD, 1 DM, 1 AVD

SUPPORT CARRIER GROUP
T.G. 52.2 - R.ADM. C.T. DURGIN
1 CV,11 CVE,1 CB,9 DD,11 DE

MINE GROUP
T.G. 52.3 - R.ADM. A. SHARP
1 CM,6 DMS,4 DM,16 AM,12 YMS,
1 PC,3 SC,8 LCP(R).

UNDERWATER DEMOLITION GROUP
T.G. 52.4 - CAPT. B.H. HANLON
6 APD
4 UNDERWATER DEMOLITION TEAMS

GUNBOAT SUPPORT GROUP
T.G. 52.5 - CAPT. AYLWARD
2 LCI(L),12 LCI(G),12 LCS(L)

MORTAR SUPPORT GROUP
T.G. 52.6 - CAPT. ROCK
1 LCI(L),35 LCI(M)

RCM AND ROCKET SUPPORT GROUP
T.G. 52.7 - COMMANDER COFFIN
9 LCI(L)(3)(R)(RCM)
3 LCI(G)(RCM)

FOR DETAILS OF ABOVE GROUPS, SEE PLATE VII

GUNFIRE AND COVERING FORCE TASK FORCE 54

Rear Adm B.J Rodgers

1. ASSIGN UNITS TO CTF 52 FOR SHORE BOMBARDMENT.
2. PROTECT T.F. 51 UNITS NEAR THE OBJECTIVE AGAINST SURFACE ATTACKS.

T.F. 54 - R. ADM. B. J RODGERS
2 BB, 7 OBB, 7 CA, 6 CL.
15 DD. 1 DM, 1 AVD

FOR NAMES OF ABOVE UNITS SEE PLATE VII

ATTACK FORCE TASK FORCE 53

Rear Adm.H.W.Hill

1. LAND ASSAULT TROOPS ON IWO JIMA ON DOG DAY.

ASSAULT TROOPS
(SEE T.F.56)

TRANSPORT GROUPS
T.G. 53.1 and 53.2
30 APA,12 AKA,3 LSD,1 LSV

TRACTOR FLOTILLA
T.G. 53.3 - CAPT. BRERETON
3 DD,3 LCI(L),46 LST

LSM FLOTILLA
T.G. 53.4 - COMMANDER CARPENTER
1 LCI(L),30 LSM

CONTROL GROUP
T.G. 53.5 - CAPT. ADELL
1 PCE,6 PC(S),4 PC,8 SC

BEACH PARTY GROUP
T.G. 53.6 - CAPT. ANDERSON

PONTOON BARGE, CAUSEWAY, AND LCT GROUP
T.G. 53.7 - LT. COMDR. RYAN
2 LCI(L),12 LCT

SMALL CRAFT GROUP
T.G. 53.8 - LT. COMDR. NELSON
1 LCI(L),2 LCI(G),2 LST(M)

FOR DETAILS OF ABOVE GROUPS, SEE PLATE VIII

TRANSPORT SCREEN
TASK FORCE 51.2
Capt. F. Moosbrugger *

EXPEDITIONARY TROOPS TASK FORCE 56

Lt.Gen H M.Smith,U S.M.C

1. CAPTURE, OCCUPY AND DEFEND IWO JIMA.
2. INITIATE THE CONSTRUCTION OF AIRFIELDS AS EARLY AS POSSIBLE.
3. ESTABLISH PROMPTLY FACILITIES ASHORE FOR NIGHT FIGHTER AIRCRAFT AND THEN FOR ALL CATEGORIES OF AIRCRAFT.
4. WHEN DIRECTED BY CTF 51 ASSUME CONTROL OF TROOP SUPPORT AIRCRAFT.
5. INITIATE THE ESTABLISHMENT OF AN ADVANCED AIR BASE AND DEFENSES.
6. ESTABLISH MILITARY GOVERNMENT.

V AMPHIBIOUS CORPS
MAJ.GEN. H. SCHMIDT, USMC.

4th MARINE DIV.
MAJ.GEN. C.B. CATES, USMC.

5th MARINE DIV.
MAJ.GEN. K.E. ROCKEY, USMC.

GARRISON FORCE
T.G. 10.16
MAJ.GEN. J.E. CHANEY, AUS.

EXPEDITIONARY TROOPS RESERVE
3rd MARINE DIV.
MAJ.GEN. G.B. ERSKINE, USMC.

SECRET

PLATE VI

* SEE PLATE IX

IWO JIMA OPERATION

AMPHIBIOUS SUPPORT FORCE
TASK FORCES 52 and 54

Rear Admiral W.H.P.Blandy - Rear Admiral B.J.Rodgers

SECRET

T.G. 52.1
GROUP FLAGSHIP

ESTES	1 AGC

T.G.52.2
SUPPORT CARRIER GROUP

R.Adm. C.T.Durgin

52.2.1 - Rear Admiral C.H.F. Spragua.

NATOMA BAY, SARGENT BAY, WAKE ISLAND, PETROF BAY, STEAMER BAY	5 CVE
BAGLEY, RALPH TALBOT	2 DD
RICHARD S. BULL, CRADY, O'FLAHERTY, WESSON	4 DE

52.2.2 - Rear Admiral C.T. Durgin.

MAKIN ISLAND, LUNGA POINT, BISMARCK SEA, ANZIO	4 CVE
DALY, HUTCHINS, RELM	3 DD
LAWRENCE C. TAYLOR, MELVIN R. NAWMAN, OLIVER MITCHELL, TABBERER, ROBERT F. KELLER	5 DE

52.2.3 - Rear Admiral C.R. Hendareon.

SAGINAW BAY, RUDYERD BAY	2 CVE
STOCKTON, PATTERSON	2 DD
J. C. BUTLER, EDMONDS	2 DE

52.2.4 - Captain L.A. Moabus.

SARATOGA	1 CV
[illegible]	1 CB
BAGLEY, HELM	2 DD

T.G.52.3
MINE GROUP

R.Adm.A.Sharp

TERROR (F)	1 CM,1 DM

52.3.1

HOPKINS, DORSEY, HOWARD, HOGAN, CHANDLER, HAMILTON	6 DMS
BREESE	1 DM

52.3.3

SIGNET, SKIRMISH, STAUNCR, SCURRY, SPECTACLE, SPECTOR	6 AM
LACY	1 DM

52.3.4

SERENE, SHELTER, STRATEGY, STRENGTH, SUCCESS, REBEL	6 AM
PC BOO	1 PC

52.3.5

CHAMPION, ARDENT, DEFENSE, DEVASTATOR GAMPLE	5 AM

52.3.6

YMS 323, 362, 374, 401, 426, 47B, 28B	7 YMS
LINDSEY	1 DM

52.3.8

YMS 193, 235, 345, 407, 475, 361	6 YMS

T.G 52.4
UNDERWATER DEMOLITION TEAMS

Capt. B.H.Hanlon

GILMER, WATERS, BATES, BARR, BULL, BLESSMAN	6 APD

T.G.52.5
GUNBOAT SUPPORT GROUP

Capt.A.C. Aylward

52.5.1

LCI(C) 627	1 LCI(C)
LCI(G) 450, 466, 469, 471, 473, 474	6 LCI(G)

52.5.2

LCI(G) 346, 34B, 43B, 441, 449, 457	6 LCI(G)

52.5.3

LCI(C) 9BB	1 LCI(C)
LCS(L) 32, 34, 35, 33, 36, 51	6 LCS(L)

52.5.4

LCS(L) 31, 52, 53, 54, 55, 56	6 LCS(L)

T.G.52.6
MORTAR SUPPORT GROUP

Capt.E.C.Rook

GROUP FLAGSHIP LC(FF)679

52.6.1 Mortar Support Unit ONE

LCI(M) 630, 631, 632, 638, 756, 1010	6 LCI(M)

52.6.2 Mortar Support Unit TWO

LCI(M) 633, 757, 760, 1011, 1012, 1023	6 LCI(M)

52.6.3 Mortar Support Unit THREE

LCI(M) 658, 659, 660, 754, 1056, 741	6 LCI(M)

52.6.4 Mortar Support Unit FOUR

LCI(M) 739	1 LCI(M)

52.6.5 Mortar Support Unit FIVE

LCI(M) 351, 352, 355, 356, 740, 742	6 LCI(M)

T.G.52.7
RCM AND ROCKET SUPPORT GROUP

Comdr. C.E.Coffin

52.7.1

LCI(R) 707, 1077, 651, 1030, 708, 1029, 644, 271, 772	9 LCI(R)

52.7.2

LCI(G) 345, 80, 437	3 LCI(G)

T.F 54
GUNFIRE AND COVERING FORCE

R.Adm.B.J.Rodgers

NEVADA	7 OBB
IDAHO	
TENNESSEE	
TEXAS	
NEW YORK	
ARKANSAS	
WEST VIRGINIA	
TUSCALOOSA	4 CA
CHESTER	
PENSACOLA	
SALT LAKE CITY	
NEWCOMB	9 DD
HEYWOOD L. EDWARDS	
RICHARD P. LEARY	
BENNION	
TERRY	
HALLIGAN	
HALL	
STEMBEL	
JOHN D. HENLEY	
PAUL HAMILTON	6 DD
BRYANT	
MULLANY	
TWIGGS	
CAPPS	
LEUTZE	
H.A.WILEY	1 DM
WILLIAMSON	1 AVD

THE ARRANGEMENT OF THE FOREGOING INTO GROUPS AND UNITS IS NOT GIVEN HEREIN, AS IT VARIED FROM TIME TO TIME.

THE FOLLOWING VESSELS FROM TASK FORCE 58 JOINED TASK FORCE 54 TEMPORARILY WHILE PERFORMING FIRE SUPPORT MISSIONS:

FROM TASK FORCE 5B:

WASHINGTON	2 BB
NORTH CAROLINA	
INDIANAPOLIS	3 CA
BOSTON	
SAN FRANCISCO	
VICKSBURG	6 CL
SANTA FE	
PASADENA	
BILOXI	
ASTORIA	
WILKES-BARRE	

PLATE VII

IWO JIMA OPERATION

FORCE FLAGSHIP
AUBURN 1AGC
Capt. R O Myers

T.G.53.10

AIR SUPPORT CONTROL UNIT
Comdr. Osborne

ATTACK FORCE
TASK FORCE 53
Rear Admiral H.W.Hill

T.G.56.2

ASSAULT TROOPS
Moj. Gen. H. Schmidt, USMC

CORPS TROOPS, FIFTH AMPHIBIOUS
CORPS, PLUS ATTACRED UNITS.
FOURTH MARINE DIVISION,
PLUS ATTACHED UNITS.
FIFTH MARINE DIVISION,
PLUS ATTACHED UNITS.

T.G.53.1

TRANSPORT GROUP *ABLE*
(TRANS RON 16)
Commo. J.B McGovern

53.1.1 TransDiv 46
CECIL, DEUEL, DARKE, HOCKING, 5 APA
THURSTON, TOLLAND, WHITESIDE 2 AKA

53.1.2 TransDiv 47
RUTLAND, HIGHLANDS, SANDOVAL 5 APA
HANSFORD, CARTERET
WHITLEY, YANCEY 2 AKA

53.1.3 TransDiv 48
TALLADEGA, MISSOULA, LUBBOCK,
DICKENS, LENAWE 5 APA
ATHENE, STOKES 2 AKA
GUNSTON HALL 1 LSD

56.2.1 ABLE Landing Group -
Major Ganaral K.E. Rockay, USMC.
FIFTH MARINE DIVISION, PLUS ATTACHED UNITS. CORPS AND GARRISON FORCE TROOPS, ASSIGNED FOR TRANSPORTATION.

T.G.53.2

TRANSPORT GROUP *BAKER*
(TRANS RON 15)
Commo. H.C. Flonogon

53.2.1 TransDiv 43
BAYFIELD, MELLETTE, HENDRY,
SIBLEY, BERRIEN 5 APA
SHOSHONE, ARTEMIS 2 AKA
OZARK 1 LSV

53.2.2 TransDiv 44
HINSDALE, PICKENS, SANBORN,
NAPA, BLADEN 5 APA
SOUTHAMPTON, STARR 2 AKA
BELLE GROVE 1 LSD

53.2.3 TransDiv 45
LOGAN, NEWBERRY, MIFFLIN,
LOWNDES, BARROW 5 APA
LEO, MULIPHEN 2 AKA
ASHLAND 1 LSD

56.2.2 BAKER Landing Group -
Major Genaral C.B. Catas, USMC.
FOURTH MARINE DIVISION, PLUS ATTACHED UNITS. CORPS AND GARRISON FORCE TROOPS, ASSIGNED FOR TRANSPORTATION.

T.G.53.3

TRACTOR FLOTILLA
Copt W.H.Brereton

Flotilla Flagships-
GREGORY, LCI(L) 994 1 DD,1 LCI(L)
53.3.1 Tractor Group ABLE
Group Flagships -
LITTLE, LCI(L) 995 1 DD,1 LCI(L)
53.3.2 LST Unit ONE
LST 241, 354, 588, 643,
715, 756, 929 7 LST

53.3.3 LST Unit TWO
LST 70, 390, 449, 481,
634, 758, 1033 7 LST

53.3.4 Tractor Group BAKER -
Captain W.H. Brareton.
53.3.5 LST Unit THREE
LST 587, 642, 716, 723,
761, 812, 930 7 LST

53.3.6 LST Unit FOUR
LST 684, 713, 731, 787,
789, 928, 931 7 LST

53.3.7 Tractor Group CHARLIE -
Captain C.R. Patarson, USCG.
Group Flagships -
ROOKS, LCI(L) 998 1 DD,1 LGI(L)
53.3.8 LST Unit FIVE
LST 726, 760, 763, 764, 779,
792, 784, 648, 1032, 9 LST

53.3.9 LST Dnit SIX
LST 42, 121, 224, 399, 782,
785, 795, 807, 940 9 LST

T.G.53.4

LSM FLOTILLA
Comdr. W H. Corpenter

Flotilla Flagship - LCI(L) 628 1 LCI(L)
53.4.1 LSM Unit ABLE
LSM 43, 44, 46, 47, 140, 141,
49, 92, 242, 261, 264, 266 12 LSM

53.4.2 LSM Unit BAKER
LSM 48, 59, 60, 145, 201, 202,
206, 207, 238, 239, 241, 260
70, 74, 126, 211, 323, 216 18 LSM

T.G.53.5

CONTROL GROUP
Copt Adell

53.5.1 Cantral Control Dnit
PCE 877, PC(S) 1403, 1421 1 PCE,2 PC(S)

53.5.2 Control Dnit ABLE
PC(S) 1460, 1461 2 PC(S)
SC 1298, 1314 2 SC

53.5.3 Control GREEN
PC 463, SC 1315 1 PC, 1 SC

53.5.4 Control RED
PC 469, SC 1316 1 PC, 1 SC

53.5.5 Gontrol Unit BAKER
PC(S) 1452, 1455 2 PC(S)
SC 1066, 1272, 1360 3 SG

53.5.6 Control YELLOW
PC 578 1 PC

53.5.7 Control 8LUE
PC 1081, SC 1374 1 PC, 1 SC

T.G.53.6

BEACH PARTY GROUP
Copt. Anderson

Group Flagship - SC 724 1 SC

53.6.1 8aach Party Dnit ABLE
TransRon 16
53.6.3. GREEN Baach Party
TransDiv 48
53.6.4 RED Baach Party
TransDiv 47

53.6.2 Baach Party Unit BAKER
TransRon 15
53.6.5 YELLOW Baach Party
TransDiv 45
53.6.6 8LUE 8aach Party
TranaDiv 44

T.G.53.7

PONTOON BARGE, CAUSEWAY, AND LCT GROUP
Lt. Comdr. Ryon

Group Flagahip - LCI(L) 772 1 LCI(L)

53.7.1 Pontoon 8arga Dnit ABLE
16 - 3 x 12 bargas.
53.7.2 Pontoon 8arga Unit BAKER
12 - 3 x 12 bargas.
52.7.3 Causaway Dnit ABLE
3 causaway aata
(aach 2 - 2 x 30 oauaaways)
53.7.4 Causaway Unit BAKER
3 oauaaway sata
(aach 2 - 2 x 30 oauaaways)
53.7.5 LCT Unit
Group Flagship - LCI(L) 423 1 LCI(L)
53.7.6 LCT Unit ABLE
LCT 630, 631, 632, 866,
1028, 1029 6 LCT
53.7.7 LCT Unit BAKER
LCT 1030, 1031, 1404,
1055, 1269, 1154 6 LCT

T.G.53.8

SMALL CRAFT GROUP
Lt. Comdr. Nelson

LCI(L) 1029 1 LCI(L)
LCI(O) 438, 441 2 LCI(G)
LST(M) 676, 678 2 LST(M)

53.8.1 Small Boat Dnit
Small boata Araignad.

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PLATE VIII

IWO JIMA OPERATION

MISCELLANEOUS TASK GROUPS OF TASK FORCE 51

Vice Admiral R.K.Turner

51.1 JOINT EXPEDITIONARY FORCE RESERVES *ComD.W.Loomis*

51.1.1 TransRon 11 - Commo. D. W. Loomis.

FREMONT, FAYETTE, KNOX, LEEDSTOWN, HARRY LEE	5 APA
ALMAACK, WARRICK	2 AKA

51.1.3 TransDiv 32 - Captain W. S. Popham.

PRES. JACKSON, PRES. ADAMS, DOYEN, BOLIVAR	4 APA
CAPE JOHNSON	1 AP
LIBRA	1 AKA
JUPITER	1 AK

51.1.4 TransDiv 33 - Captain S. M. Haight.

CALLAWAY, FRED FUNSTON, JAMES O'HARA, FELAND	4 APA
ALHENA	1 AKA
HERCULES	1 AK

56.3 Landing Force Reserve
Major General C. B. Erskine, USMC.
3rd MarDiv plus attached units.

51.1.5 Screen - Captain F. L. Tedder.

ANTHONY, BUSH, WADSWORTH, BOYD, BRADFORD	5 DD
SWEARER, STERN, O'NEILL	3 DE

51.2 TRANSPORT SCREEN *Capt. F.Moosbrugger*

BISCAYNE Flagship	1 AGC
HYMAN, MANNERT L. ABELE, EVANS, CALHOUN, PUTNAM, FULLAM, GUEST, BENNETT, HUDSON, PRINGLE, STANLY, HOWORTH, GREGORY, LITTLE, VAN VALKENBURGH, HALFORD, ROOKS, WADSWORTH, ANTHONY, MULLANY, BOYD, BRADFORD, BUSH	23 DD
SAMUEL S. MILES, WESSON, ELDEN, HALLORAN, WILLIAM C. MILLER, CABANA, CIONNE, DEEDE, CANFIELD, RALL, CONNOLLY, FINNEGAN, GRADY, McCLELLAND, RIDDLE, SWEARER, STERN, O'NEILL	17 DE
ROBERT H. SMITH, THOMAS E. FRASER, SHANNON, HARRY F. BAUER	4 DM

* 51.3 SERVICE AND SALVAGE GROUP *Capt. J.R.Curtis*

AGENOR, OCEANUS	1 ARL, 1 ARB
CLAMP, GEAR, SHACKLE	3 ARS
TAWASA, MUNSEE	2 ATF
ATR 50, ATR 80	2 ATR
LCS(L)(3) 51, 32, 33, 34, 35, 36	6 LCS(L)(3)
LST 766 (Brodie)	1 LST

51.4 HYDROGRAPHIC SURVEY GROUP *Comdr. Saunders*

PC(S)(H) 1388, 1396	2 PC(S)(H)

SECRET

PLATE

IX

* ComPhibsPac (CTF 51) OpPlan No. A25-44.

IWO JIMA OPERATION

FAST CARRIER FORCE
TASK FORCE 58

Vice Admiral M.A.Mitscher

TASK GROUP 58.1

R.Adm.J.J.Clark

HORNET (F) WASP BENNINGTON	3 CV
BELLEAU WOOD	1 CVL
MASSACHUSETTS (F) INDIANA	2 BB
VINCENNES (F) MIAMI VICKSBURG	3 CL
SAN JUAN	1 CL(AA)
DeHAVEN MANSFIELD LYMAN K. SWENSON COLLETT MADDOX BLUE BRUSH TAUSSIG SAMUEL N. MOORE JOHN RODGERS STEVENS HARRISON McKEE MURRAY RINGGOLD SCHROEDER SIGSBEE DASHIELL	18 DD

TASK GROUP 58.2

R.Adm.R.E.Davisan

LEXINGTON (F) HANCOCK	2 CV
SAN JACINTO	1 CVL
WISCONSIN (F) MISSOURI	2 BB
SAN FRANCISCO (F) BOSTON PITTSBURGH	3 CA
OWEN MILLER THE SULLIVANS STEPHEN POTTER TINGEY HICKOX HUNT LEWIS HANCOCK MARSHALL CUSHING HALSEY POWELL COLAHAN UHLMANN BENHAM YARNALL TWINING STOCKHAM WEDDERBURN	18 DD

TASK GROUP 58.3

R.Adm.F.C.Sherman

ESSEX (F) BUNKER HILL (FF)	2 CV
COWPENS	1 CVL
NEW JERSEY (F) SOUTH DAKOTA	2 BB
PASADENA (F) SPRINGFIELD ASTORIA WILKES-BARRE	4 CL
INDIANAPOLIS (FFF)	1 CA
AULT ENGLISH CHARLES S. SPERRY WALDRON HAYNSWORTH WALLACE L. LIND JOHN W. WEEKS HANK BORIE PORTERFIELD CALLAGHAN CASSIN YOUNG IRWIN PRESTON	14 DD

TASK GROUP 58.4

R.Adm.A.W. Radford

YORKTOWN (F) RANDOLPH	2 CV
CABOT LANGLEY	2 CVL
WASHINGTON (F) NORTH CAROLINA	2 BB
SANTA FE (F) BILOXI SAN DIEGO	3 CL
BARTON LAFFEY LOWRY INGRARAM MOALE McCORD THRATHEN HAZELWOOD HEERMANN HAGGARD FRANKS HAILEY CLARENCE K. BRONSON COTTEN DORTCH GATLING HEALY	17 DD

TASK GROUP 58.5

R.Adm.M.B.Gardner

ENTERPRISE (F)(N) SARATOGA (N)	2 CV
ALASKA	1 CB
BALTIMORE (F)	1 CA
FLINT	1 CL
REMEY NORMAN SCOTT MERTZ MONSSEN MELVIN McDERMUT McGOWAN McNAIR LAWS LONGSHAW MORRISON PRITCHETT	12 DD

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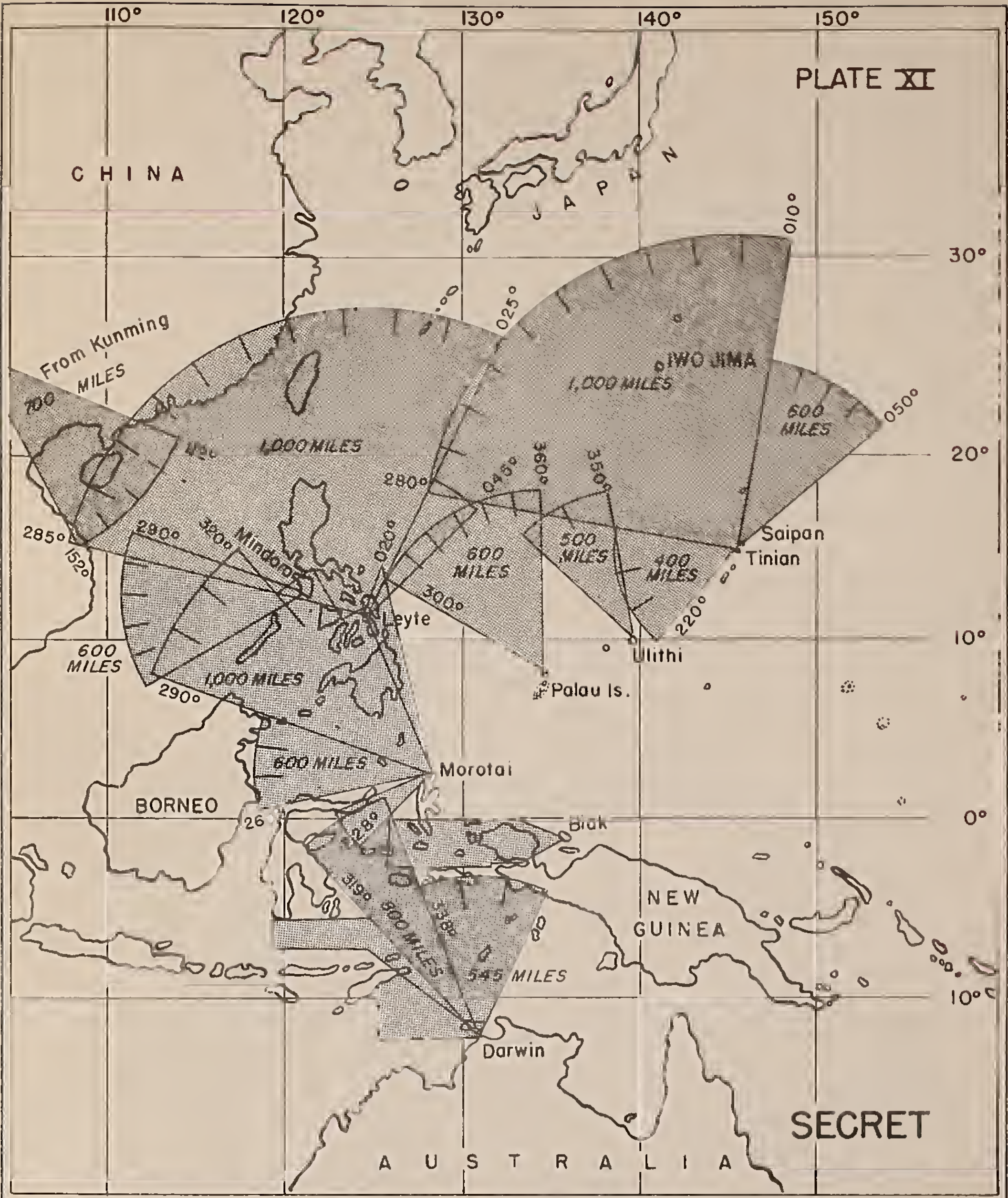
PLATE X

PLATE XI



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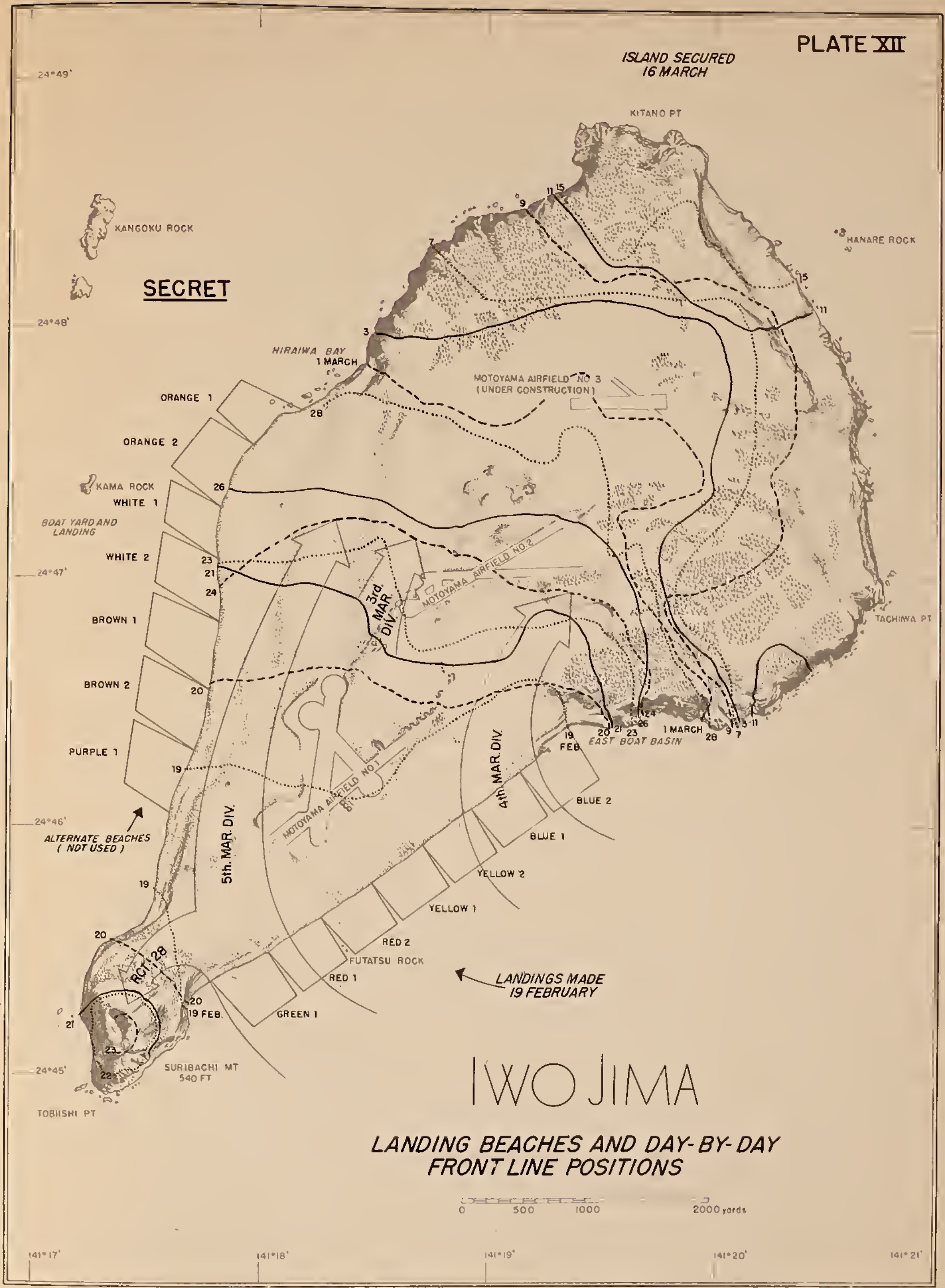
IWO JIMA OPERATION

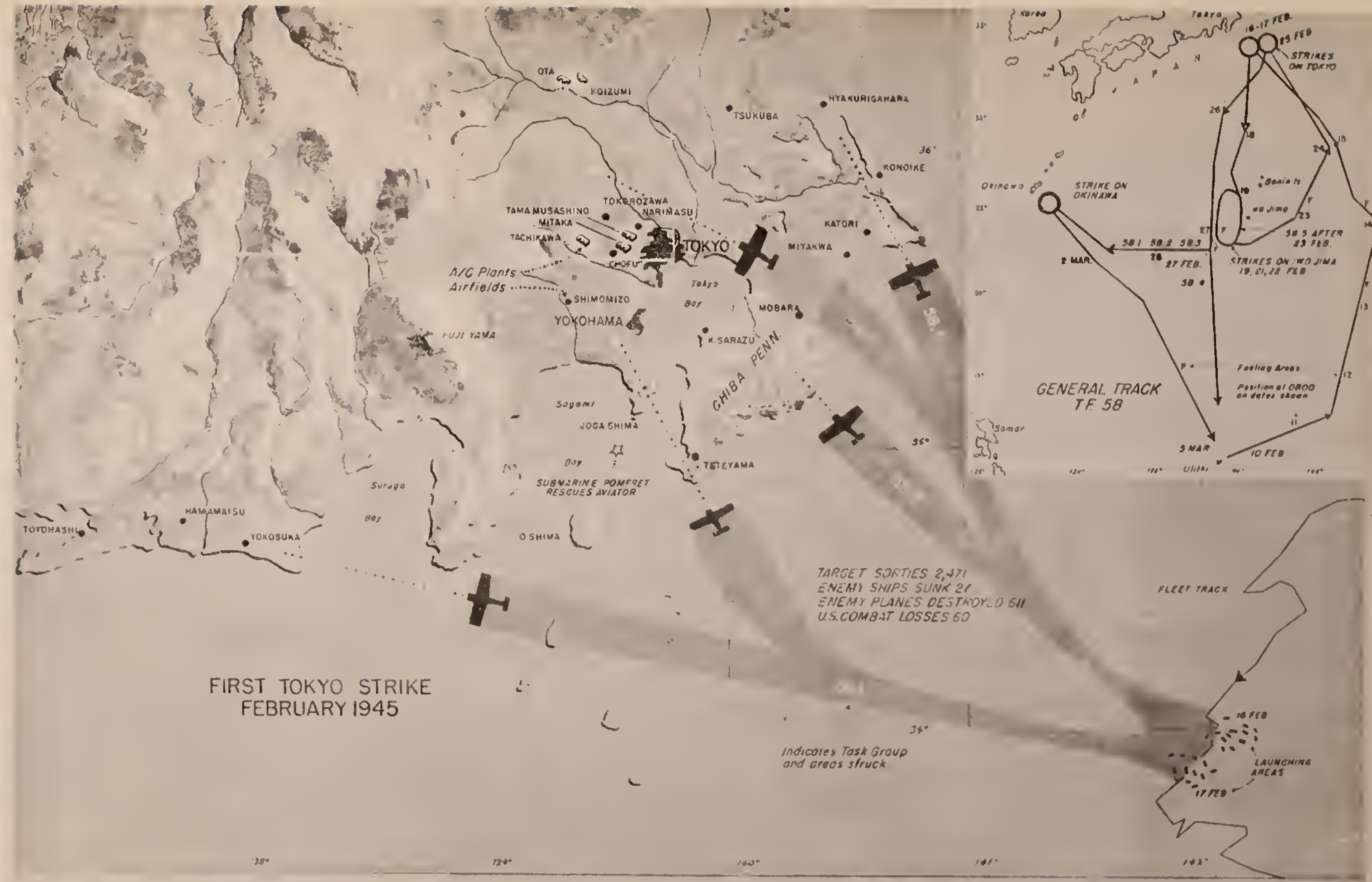
SHORE BASED AIR SEARCH PLAN

PLATE XII



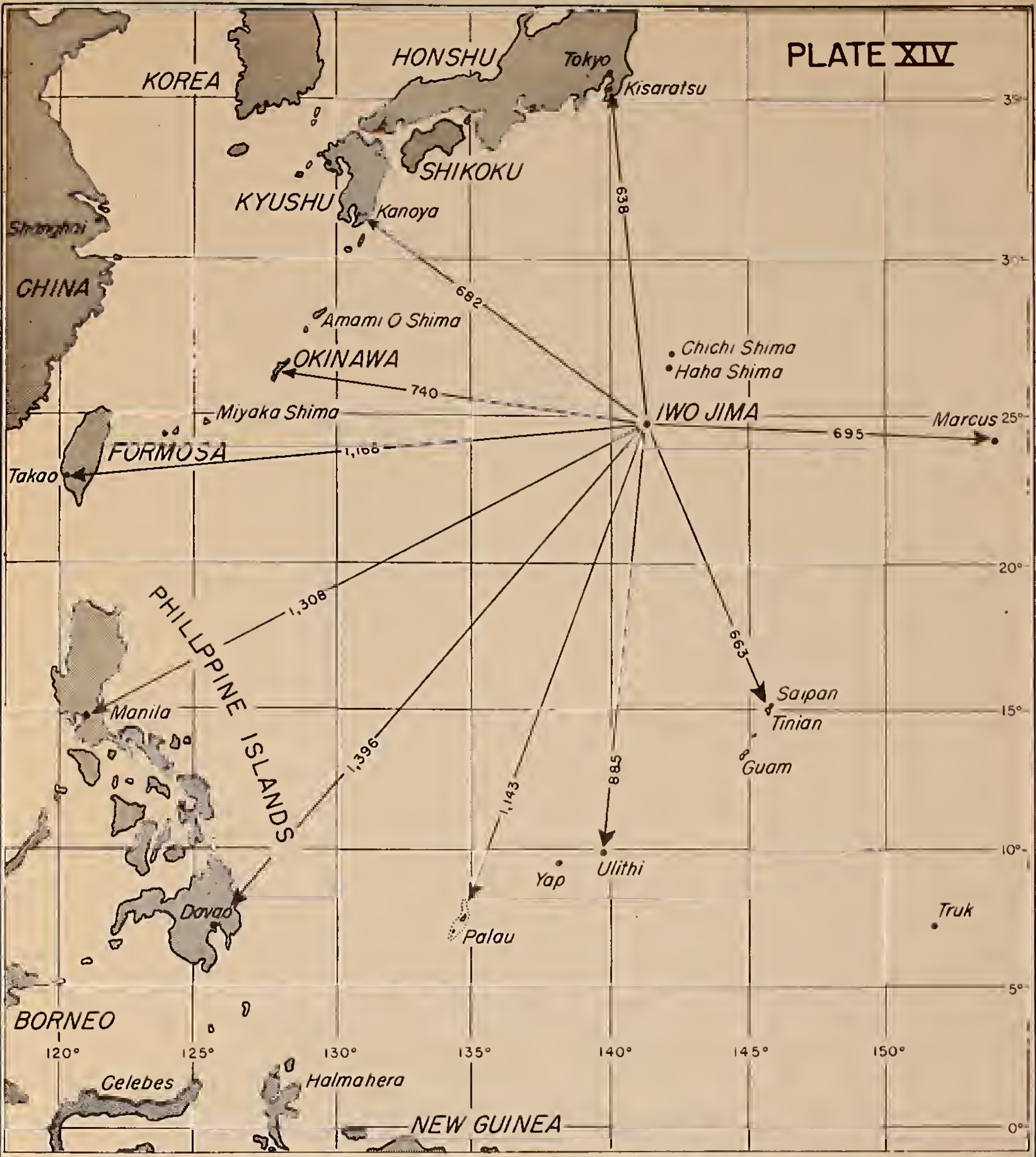
IWO JIMA

LANDING BEACHES AND DAY-BY-DAY FRONT LINE POSITIONS



SECRET *Fast Carrier Force Operations 10 Feb.- 5 Mar. 1945* PLATE XIII

PLATE XIV



THE STRATEGIC AREA
FEBRUARY 1945

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